

# THE COMMERCIAL REVIEW.

Volume V.

FEBRUARY, 1848.

No. 2.

## Art. I.—PUBLIC LANDS ACQUIRED BY TREATY, ETC.

PROCEEDINGS BY THE AUTHORITY OF THE UNITED STATES FOR ASCERTAINING AND ADJUDICATING LAND TITLES, AND CLAIMS TO LAND, WITHIN THE FORMER POSSESSIONS OF GREAT BRITAIN, FRANCE AND SPAIN, SUBSEQUENT TO THEIR OCCUPATION BY THE UNITED STATES.

The Board of Commissioners in each district was required to convene for business on or before the 1st day of December, 1805, at their respective offices. Each Board, or a majority of each, when duly organized, was authorized and empowered to hear and adjudicate, "and in a summary manner decide, according to *justice* and equity, on all claims filed with the Recorder in conformity with the provisions of this act:" all such decisions, when finally made, were to be submitted to Congress for their determination thereon." (18)

The Commissioners of the respective Boards were required to hold their sessions until the 1st of March, 1806, without adjournment for a longer period than three days; and, subsequently, "until they shall have completed the business of their appointment;" and to transmit to the Secretary of the Treasury full reports of their decision, signed by a majority of the Board, and designating every claim confirmed by them, and those rejected or disallowed; together "with the substance of the evidence adduced in their support," in order that the same should be laid before Congress at their next ensuing meeting.

The *sixth* section provided for the employment of *an agent* on the part of the United States, before each Board, for the purpose of "investigating and opposing all claims which he might deem fraudulent and unfounded." For the dispatch of business, and for recording Spanish and French grants, deeds, or evidence of claim, a translator of the Spanish and French languages was also attached to the Recorder's office. (19)

The Board for the District of Louisiana appear to have entered first upon the duties of their office. This Board, as first organized, consisted of Clement B. Penrose, *Recorder*, and J. C. B. Lucas and Jas L. Donaldson, *Commissioners*, Thos. F. Riddick, *Clerk*, and Wm. C. Caw, Esq., *Agent* of the United States. Frederick Bates subsequently succeeded as Commissioner.

In the Territory of Orleans, the Board for the Eastern District, as

(18) Land Laws of United States—compilation of 1827: pp. 520, 521.

(19) Land Laws of United States, p. 522.

first organized, consisted of P. Grymes, *Recorder*, Joshua Lewis and John B. Robertson, *Commissioners*.

The Western Board, as first organized, consisted of Wm. Garrard, *Recorder*, and Levin Wailes and Gideon Fitz, *Commissioners*; John Thompson was *Clerk*, and was subsequently succeeded by Lloyd Posey.

Thus organized, the respective Boards entered upon the arduous duties of their several offices, which they continued to perform with great fidelity and assiduity for several years, during which they were, from time to time, instructed as to the will of Congress touching such cases as were suspended in their final decision.

At the close of one year, the Commissioners reported to Congress that, under the provisions of the *first* and *second* sections of the act of March 3d, 1805, a large number of meritorious settlers would be excluded from the benefits to which they seemed entitled. For the relief of these, a "*supplementary act*" was passed and approved April 21st, 1806. By this act it was provided that, all persons twenty-one years of age, or the heads of families, who, prior to the 1st of October, 1800, had commenced an actual settlement, and who had continued in the occupancy and cultivation of the same *three years*, or until the 20th of December, 1803, should be considered claimants *in* the spirit and intention of the Spanish government, and as such, should be entitled to the confirmation of a settlement right not exceeding one square mile: also, that any person who had remained fourteen years in the quiet possession and occupancy of land prior to the 20th of December, 1803, *although a minor* at the time of settlement, should be entitled to a settlement right of six hundred and forty acres, or any amount not exceeding one mile square.

The same act extended the time for filing claims until the 1st of January, 1807; and for the convenience of claimants remote from the Land Office, the Recorders were authorized to appoint deputies for each county, who should receive and record all claims in the same manner as the Recorder himself might do. (20)

A. D. 1807. The following year an act of Congress made provision for the relief of another numerous class of claimants, by the passage of a law entitled "An act respecting claims to land in the Territories of Orleans and Louisiana," approved March 7th, 1807. (21)

The *first* section of this act repeals so much of the former act as requires the original claimants of a grant, concession, or order of survey, to have been the head of a family or twenty-one years of age.

The *second* section declares any person, and the legal representatives of any person, who, on the 20th of December, 1803, was, and had been for ten years successively, in possession of any tract of land not exceeding two thousand acres, free from the claim of other persons, shall be confirmed in their titles to the same.

The *fourth* section confers upon the Commissioners "*full powers to decide*, within their respective districts, upon all claims to land derived in conformity with the laws, established usages and customs of the French and Spanish governments," in favor of persons who, on the

(20) Land Laws of United States—edition of 1827: p. 532 to 536.

(21) Land Laws of United States, p. 548.

20th of December, 1803, were inhabitants of Louisiana; provided the claim does not include any lead mine or salt spring.

The time for the presentation of claims was also extended in both Territories, until July 1st, 1808. (22)

The sixth section requires the Commissioners to make out and transmit to the Secretary of the Treasury and to the Surveyor General, a full and complete transcript of their *final decisions made in favor of claimants*, each of whom should be furnished with a *certificate*, showing him to be entitled to a patent for the tract of land therein designated.

The eighth section required the Commissioners to prepare and report to the Secretary of the Treasury a list of all claims which *had not been confirmed by them*; together with their opinion on them severally, and arranged under *three classes*, viz:

1st. Those which, in the opinion of the Board, *ought to be confirmed* under the provisions of the several acts of Congress.

2d. Those which, *although not embraced* in said acts, *ought, nevertheless, to be confirmed*, in conformity with "the laws, usages and customs of the Spanish government."

3d. Those which are embraced in *neither* of said acts, and *ought not to be confirmed*, conformably to the laws, usages and customs of the Spanish government.

It may be proper, in this place, to notice some of the general laws, usages and customs of the Spanish government in Louisiana relative to the appropriation of the royal domain to private uses.

In this respect the policy of the royal government was kind and beneficent, even to liberality; and this policy was extended to every deserving immigrant, whether from the mother country or from foreign nations, who were in peace and friendship with the Spanish Crown. Influenced by this benevolent policy, the royal domain was reserved for the encouragement of emigration, agriculture, the arts and manufactures. Immigrants, who, in this way could add to the population, wealth and resources of a new, fertile, and almost uninhabited province, were sure to receive liberal grants and concessions of land, at the rate of eight hundred arpents for the head of a family, half as much for his wife, and in proportion to every child or slave capable of labor.

The amount of land granted or conceded to a settler, always preserved a relative proportion to the number of persons in his family, or to his means for conducting an agricultural or manufacturing establishment, such as mills, factories or public improvements.

The whole policy of the Spanish government in Louisiana and West Florida was in *favor* of small grants and strictly averse to large ones. This policy was rigidly enforced as early as 1770, when Governor O'Reilly, under a royal order, issued his proclamation making known the will of the King, by a full enumeration of the regulations which were to be observed in all grants of land in the province. (23)

1. Gratuitous concessions for cultivation and pasturage.
2. In consideration of public services.
3. In consideration of a tax paid the government upon such body of

(22) Land Laws of United States, p. 547.

(23) American State Papers—Public Lands—Vol. 4, p. 84.

lands as the individual might desire and purchase at public sale at a certain rate per arpent.

Concessions conveyed no complete title; but certain conditions fulfilled within *three years* after the concession, entitled the holder to a patent—*titulo en forma*—from the government.

Applications for *large grants* were always refused, as was the case in the year 1800, when Don Ramon Lopez y Angulo, the Intendant of Louisiana, refused a large grant to Henry Peroux, commandant at New Madrid, upon his petition, signed also by many individuals of his district. The Intendant, unwilling to countenance a "speculation in the public lands," refused a grant which would be "hurtful to poor people, who would thereby be compelled to buy of him that which they were free to obtain of him gratuitously;" and he declared that it never was the intention of the King "to dispose of the lands in such large quantities, and under such circumstances," as was fully laid down in the regulations published by Morales on the 17th of July, 1799.

The Intendant further alleges, that it would be *improper*, "because it would not be just; that for a *small consideration*, one or more speculators should make themselves masters of a great extent of lands to the prejudice of others coming to settle; and who, consequently, would find themselves driven to *purchase* those lands, which they might otherwise have obtained *free of expense*." (24)

Again, it is declared that, "under the Spanish government the Intendant himself could not have made a grant *contrary to law*, as it would be disregarded."

To obtain a grant, the applicant for lands filed his petition, or *requete*, prepared in due form, in the office of the Commandant of the District in which the land is situated. The *requete* sets forth the extent, situation and boundaries of the tract desired, and the purposes to which it is to be appropriated, together with conditions of forfeiture, the extent of improvement or culture promised within three years, &c., The Commandant, approving the object and extent of the petition, and seeing no reason why the concession should not be made, procured the certificate of the Surveyor General, showing that the land is vacant and conflicted with that of no other person, with a recommendation of the petitioner to the consideration and bounty of the Governor-General, as one well calculated to advance the interests of the province. The Governor-General and the Intendant entered upon the petition their assent to the concession, with an order of survey to the Surveyor General, who caused a survey and plat of the same to be made and attached thereto. This completed the "*concession*," which served as a title, *not transferable*, until the expiration of *three years*; at the expiration of which period, the holder or claimant, by adducing evidence that he has complied with all the conditions obligatory on him, is entitled to receive from the government the *titulo en forma*, or patent. This completes the grant, and vests a title in the grantee. Such was the general tenor of procedure in the appropriation of the King's domain to actual settlers.

Meantime the Boards of Commissioners, having been closely en-

gaged in the duties of their office for more than three years, began to complete their reports of confirmations under the provisions of the several acts already recited.

The first monthly report was from the Board at St. Louis, dated December 1808, and comprising *one hundred and ten* confirmations, for which certificates had been issued to the proper claimants. Similar monthly reports were made consecutively until the 20th of January, 1812, when the aggregate number of confirmations, upon which certificates had been issued, was *thirteen hundred and forty-two*; pertaining chiefly to the districts of St. Louis, St. Charles, St. Genevieve, New Madrid and Cape Girardeau. (25)

Besides claims confirmed, this Board transmitted by the hands of the Recorder, C. B. Penrose, a complete report for the General Land Office, containing an elaborate schedule, comprising no less than *two thousand unconfirmed and rejected* claims, arranged into forty-nine classes. Among these were a large number of claims, which, in the opinion of the Board, *ought not to be confirmed*, on account of the *taint of fraud and corruption*, WITH WHICH THEY WERE DEEPLY IMBUED. (26)

The claims which, in the opinion of the Board, *ought to be confirmed*, were arranged under the following classes, viz:

1. Those derived from *bona fide* French or Spanish orders of survey, or concessions, bearing date *on and after the 1st of October, 1800, A. D.*, for a quantity *exceeding eight hundred arpents*, but not exceeding one league square; and which had been either inhabited or cultivated prior to December 20th, 1803, in conformity with the terms expressed in said concession, viz: for objects of public utility, such as the erection of mills, bridges, or manufactories.

2. Those derived as above, *not exceeding eight hundred arpents*, for services rendered the government, or for works of public utility, wherein the conditions of the concession have been fulfilled.

3. Those of similar character, and not exceeding eight hundred arpents to persons who have received no other grant, and which have never been declared fraudulent by any former Board.

4. Those that have been either cultivated or inhabited prior to 20th December, 1803, *without permission*.

5. Those for *towns and villages, common fields or commons*, whether recorded or not.

These, and claims pertaining to other classes, were submitted to the consideration of Congress for such legislation as might be deemed expedient.

Under provisions made by law, the Board at St. Louis, through Frederick Bates, Recorder, made its *final report* of confirmations for the Missouri Territory, on the 2d of February, 1816. This report comprised *eight hundred* confirmations under the provisions of an act of Congress approved June 13th, 1812: also, *four hundred and eighty* confirmations and opinions under the provisions of the act of April 12th, 1814: (27) also, confirmations and opinions relative to settlement rights in virtue of the several acts of Congress, from June 13th,

(25) American State Papers—*Public Lands*—Vol. 2, p. 563 to 603.

(26) Idem—Vol. 2, p. 389 to 562. See schedule in detail.

(27) Idem, pp. 609, 611.

1012, until April 12th, 1814, comprising *four hundred and forty-five confirmations, and four hundred and ninety rejections.* (28)

The Boards of Commissioners for the Eastern and Western Districts of the Territory of Orleans, had been employed in like manner in their respective duties; the result of their labors were reported soon afterward.

The first monthly report of *claims confirmed* by the Western Board, was dated in December 1811, and comprised twenty-five confirmations, for which certificates had been issued. Consecutive monthly reports from the same Board were made until December 1812, when the whole number of confirmations on which certificates had been issued, was *two thousand one hundred and forty-eight.* Subsequent reports augmented the entire number up to June 1815, to *two thousand two hundred and seventy-eight.* (29) On the 30th of December of the same year, the Western Board again reported *an additional list* of confirmations under the provisions of the several acts of Congress, comprising no less than *twelve hundred and eighty-three claims confirmed,* for which certificates had been issued. Thus, the entire number of claims confirmed by this Board up to the year 1816, when the Commissioners were succeeded in their duties by the Registers and Receivers of the respective Land Offices, was *three thousand five hundred and fifty-eight.* (30)

The Eastern Board in the meantime had been delinquent in making regular and properly arranged reports; yet, the imperfect reports received up to January 1812, as submitted to Congress, indicated the adjudication of *eleven hundred and eighty-five claims which were confirmed,* and for which certificates had been issued; besides *two hundred and sixty claims rejected* by the Board. (31) The subsequent reports from this Board were not duly received by the Treasury Department, when the Commissioners were superseded by the Register and Receiver in 1816.

The report of the Register, Samuel H. Harper, made November 20, 1816, contained such an unusual and improbable number of confirmations, that the suspicions of the Department were awakened to the existence of an extensive scheme of fraud and collusion, which required the interposition of Congress. It became apparent, that many fraudulent claims had been allowed and *confirmed,* not only by the officers at New Orleans, but also by those at Opelousas: that an improper and suspicious indulgence had been extended by the officers of these Land Offices, to the admission of fraudulent claims, which, subsequently, required the interposition of a change of men.

The confirmations of claims suspected of fraud were suspended by the government until proper inquiry should be instituted as to the alleged fraud and collusion. At length, Congress proceeded to ratify all the confirmations of the Land Officers at New Orleans, so far as to sanction a *quit-claim,* on the part of the United States, to the lands thus awarded by the offices respectively.

For this purpose, on the 11th of May, 1820, an act of Congress was

(28) American State Papers—*Public Lands*—Vol. 2, p. 293-5.

(29) Idem—Vol. 2, p. 708 to 735.

(30) Idem—Vol. 3, p. 151 to 220.

(31) Idem—Vol. 2, p. 224 to 367.

passed, entitled "An Act supplementary to the several acts for the adjustment of land claims in the State of Louisiana. (32)

The *first* section ratified and confirmed all the land claims within the Eastern District, as described by the Register and Receiver of said District, in their report to the Commissioner of the General Land Office, bearing date November 20th, 1816, and which are therein recommended for confirmation, but *only* as against any claim on the part of the United States.

The *second* section extended the time previously prescribed for filing claims, from July 1st, to December 31st, 1830. (33)

For several years the same system of fraud and collusion continued in the respective offices. The first report, made by the Register at New Orleans, under the provisions of the act of May 11th, 1820, and dated January 1st, 1821, tended strongly to confirm suspicions heretofore awakened, as to an extensive scheme of fraud, which had been put in operation through these Land Offices, and which had resulted in the confirmation of a large number of factitious and fraudulent claims. Nor were these frauds tolerated alone in the Eastern District. The Register of the Western District in a most unaccountable manner neglected to make proper returns to the General Land Office for several years, until in the year 1822, he was superseded in his office by Valentine King, Esq., who was instructed to examine and investigate the claims previously filed with the Register, and to report the same as early as practicable, with his opinion upon them severally, in order that the public surveys might not incur further delays.

On this subject Mr. Graham, Commissioner of the General Land Office, in his report for the use of Congress, dated December 17th, 1824, observes: "It is believed that the reports of the Land Officers at New Orleans, dated November 20th, 1816, and January 6th, 1821, and that of the Register of the Land Office north of Red River, dated January 1st, 1821, include and *recommend for confirmation* many fraudulent claims, and claims *not entitled* to confirmation, although some claims have been confirmed on their reports.—Some of the claims contained in the reports of the Register at New Orleans, I understand have been admitted to be fraudulent," &c. "From information received at this office, there is reason to believe that many similar and *equally unfounded* claims have been filed with the Register at Opelousas, whose report, as required by the act of 1820, has not yet been returned." (34)

Meantime soon after the close of the war, and soon after the appointment of Samuel H. Harper as Register at New Orleans, fraudulent claims began to appear; from which time they continued to multiply upon the files of the different offices, as claims held by numerous assignees, among whom were some prominent inhabitants of Louisiana and the Missouri Territory. Yet none of these secured for themselves a greater notoriety as holders of fraudulent land claims than James Bowie, a man of courage and daring. Many of these

(32) American State Papers—*Public Lands*—Vol. 3, p. 506.

(33) See Land Laws of the United States—Edition of 1827: p. 778 to 780.

(34) American State Papers—*Public Lands*—Vol. 4, p. 3 to 6.

claims, in one form or another, were urgently pressed upon the attention of Congress and of the Land Offices acting under the provisions of various laws enacted to meet the diversity of cases.

For the purpose of disposing of numerous suspicious land claims of this kind, purporting to be derived from the Spanish government, within the Territory of Arkansas, the claimants, by acts of Congress passed May 26th, 1824, and May 22d, 1826, were authorized to institute judicial proceedings in the Federal Court of the Territory, to test the validity of the claims. But such was the influence and assurance with which the claims were subsequently urged through the Court, that the origin and genuineness of the documents by which they were sustained, were not permitted to be investigated or questioned; and, as a matter of course, the claims were confirmed by the Court upon factitious documents and fraudulent testimony.

Yet these claims, confirmed as well as unconfirmed, were, by hundreds, placed in the hands of agents both in Natchez and other parts of Mississippi, in order to be sold or hypothecated as valuable land script, upon which large sums of money were procured to advance other schemes of speculation. Nor was there wanting in the city of Natchez, from 1821 to 1830, men who claimed a residence there, deeply interested in the purchase and sale of these spurious claims, if they were not concerned in the aiding and abetting of those who fabricated them. Men of deep thought and great legal attainments were suspected of being jointly interested in the sale and confirmation of the same by the constituted authorities.

These spurious documents, as prepared, gave factitious evidences of age and use far more ancient than the date and manufacture of the paper upon which they were written; and many of those, finally confirmed, covered lands and secured titles to some of the finest estates in the former parishes of Opelousas and Attakapas; and certain it is, that there are now residing in Natchez and its vicinity, wealthy proprietors of splendid sugar estates upon the Teche, Terrebone and Caillou bayous, secured by means of these claims.

Such is a faint outline of a numerous class of claims which are known by the general appellation of *Bowie claims*, and whose intrinsic merits are known to but few.

To remedy this evil, the President of the United States in December 1829, communicated to Congress a report from the Commissioner of the General Land Office relative to the extensive frauds practised in the Federal Court of the Arkansas Territory. To investigate the same, Col. Isaac T. Preston, Register at New Orleans, "a man possessing in an eminent degree the qualifications necessary for such an investigation," had been sent to Little Rock for the purpose of examining the original documents or Spanish title-papers upon which a large number of claims had been confirmed to the holders. By comparing these documents with those from New Orleans, "which were known to be genuine," Col. Preston ascertained beyond a doubt, that extensive frauds had been successfully practised in this case.

"The result of his investigations showed that *one hundred and seventeen claims* covering 60,000 acres of land, had been confirmed by the Court between the 19th and 24th of December 1827; and that

seven claims covering 20,000 acres, were still pending: also, that *one hundred and eighty-eight* claims had been withdrawn and struck from the files of the docket, because the holders had not given security for the costs:" and the Commissioner declares there exists *no doubt* but that the whole of those claims are founded on *forged evidences of title*. "It further appeared that under an order of Court made on the 9th of October, 1828, the *original papers*, on which these claims were founded, had been withdrawn from the files of the Court, with the exception of those in *fifty-eight* cases. (35)

The Commissioner further states, that application had been made to the General Land Office for *patents* on the entries made at Little Rock and Batesville, for *eighty-four* of the claims confirmed by the Court. "For the first six cases of entries made at Batesville, patents were issued; but as the number of applications for patents increased, and as the patents were required to be issued to *assignees*, and as a comparison of the assignments with each other made it evident that they had all *been manufactured* by the same individuals," the Commissioner determined to withhold the "patents for the remainder of the claims, fully satisfied that gross frauds had been committed upon the Court." "Two of the claims for which patents were issued, were unquestionably founded on fraudulent evidences of title," and to prevent further entries of the same kind, the Registers at Little Rock and Batesville were instructed to *permit no further entries*, under the decisions of the Court, until the pleasure of Congress should have been ascertained on the subject; and in the meantime measures were instituted to procure a revision and reversal of the decisions. (36)

The claims above referred to were known as the "Bowie Claims," and comprised "upwards of 60,000 acres of floating rights to location upon the best unappropriated lands in the Territory, in any quantity over 80 acres, it having been proven and decreed that the lands, in every case, conceded by the Spanish government had been appropriated by the United States." (37)

The number of *Bowie claims* filed in the Court was no less than *one hundred and seventeen*, which had been confirmed. This whole number was filed in November 1827, and in less than one month were all confirmed by Judges Trimble and Johnson, in the absence of one of the members, notwithstanding the application made by the Attorney of the United States "for time to investigate the claims, and to procure testimony for *resisting* the claims successfully." The testimony upon which all these claims were adjudicated, was solely that of John Heberard, David Devore and Samuel Masters, substantially the same in *one hundred and twenty-four* cases. (38)

The orders of survey upon which these claims were allowed, purported to have been signed by Governors Miro and Gayoso, whose signatures in every instance had been *counterfeited*, and but imperfectly imitated.

The signature of Gayoso was an evident counterfeit and but poorly

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(35) See American State Papers—*Public Lands*—Vol. 5, p. 336 to 338.

(36) *Idem*—Vol. 5, p. 336.

(37) *Idem*, p. 380.

(38) *Idem*—Vol. 5, p. 338.

executed, for he always signed his name in a smooth, flowing hand, *in extenso*, "Manuel Gayoso, de Lernos." That of Miro, who generally signed his name Estevan Miro, was counterfeited solely by the use of the four letters, "Miro," in a miserable hand.

A close examination of these documents convinced Colonel Preston that they all were written by two, and not exceeding four hands; two in drafting and two in signing; and although the *requetes* purported to be the *petitions* of one hundred and twenty-four persons, written and signed by themselves at various times *during fifteen years*, they all appear to have written *good hands*, and to have signed their names *well*, although, according to the witness Heberard, they were generally hunters and trappers in Upper Louisiana, where, it is notorious, that *before the change of government*, few or none of the people about the "Posts" of Arkansas and Washita, excepting the public officers, could write their names.

"The *requetes* evince but little care or effort in the writer to imitate the Spanish idiom or character of writing, although purporting to have been written by so many Spaniards—the character of the writing being evidently American."

Among the evidences that these *requetes* were the productions of only one or two persons, Col. Preston adduces the uniformity in the erroneous orthography which pervades the whole; such as *tiera* for *tierra*, *ordiniaria* for *ordinaria*, *profondidad* for *profundidad*, *cartose* for *catorce*, *dose* for *doce*, *trese* for *trece*, *dies* for *diez*, *marso* for *marzo*, *estableser* for *establecer*, *ciendo* for *siendo*, &c. One of these hands invariably writes the Surveyor General's name *Laveieu Trudieu*, instead of *Laveau Trudeau*, and *Orhians* for *Orleans*.

Whereas Col. Preston declares that he has never seen a *genuine order* of a Spanish Governor that contained an erroneous word or letter—for all such errors, if any existed, were corrected by the clerk before signing.

The appearance of such numbers of fraudulent claims, requiring location *before* the public surveys could proceed, greatly impeded the regular surveys of the public lands within the State of Louisiana. To such an alarming extent had these forged evidences of title been filed in the several offices, that the Surveyor General was instructed to receive for record *no private claim* or survey "which included lands claimed by virtue of written evidence of title, emanating from the Spanish government, and confirmed by Congress, where there *was good reason* to believe that *such written evidence of title had been forged*; and in the meantime to proceed with the public surveys *regardless of any such alleged claim*. (39)

It would extend the limits of this article beyond our design, to attempt a detail of all the subsequent legislation of Congress, until the final disposition of all the claims which were reported to that body for their action. Suffice to say, that after the Boards of Commissioners had retired from the duties assigned them, Congress was the last resort where claimants continued to urge their claims for allowance for more than twenty years longer, in no wise deterred by

(39) See American State Papers—*Public Lands*—Vol. 5, p. 336.

the groundless character of their titles, or the preposterous nature of their claims.

The whole system of factitious and fraudulent concessions and supposititious grants which thronged the records of the Boards of Commissioners and embarrassed their deliberations for more than ten years, seems to have had its origin in an expression which appears to have been unnecessarily, and in all probability, without any such design on the part of the Spanish King, inserted in the order of delivery, dated October 15, 1802. This order issued to the Intendant of Louisiana, instructed him to deliver the province to Gen. Victor, or any other officer duly authorized to receive the same. (40) In the order the King expresses his hope that the inhabitants of Louisiana will "continue, and be protected in the peaceful possession of their property; and that all grants, of whatever denomination, made by his Governors, may be confirmed, *although not confirmed by himself.*" The Intendant in his proclamation issued from New Orleans, May 18th, 1803, announcing the orders of his Majesty, took special care not to omit this benevolent expectation of his sovereign, by reiterating the whole tenor of the order. Hence, on this subject, he informs the people "that his Catholic Majesty hopes that the inhabitants shall be maintained and protected in the peaceful possession of their property; and that all grants and property of whatever description, derived from his *Governors*, in the provinces, shall be confirmed, *although not confirmed by himself.*" (41)

This suggested the plan of grants, *ad libitum*, and without regard to any sanction of the King or his authorized representative, the Intendant, either as to the extent or nature of the claims.

After the *annexation* of the Florida parishes to the State of Louisiana in 1812, the land claims in this district were submitted to the same kind of adjudication which had been adopted for the Natchez district and the Illinois country. The first provision made by Congress for this purpose was, the act approved April 25th, 1812, entitled "An Act for ascertaining the titles and claims to lands in that part of Louisiana, which lies east of the Mississippi river, and the island of New Orleans." (42)

The *first* section provided for the organization of two Land Districts in that part of West Florida south of lat. 31°, and between the Perdido and Mississippi rivers. The first district comprised all that portion west of Pearl river; the second, all that portion east of that river. In each of these districts was appointed a "Recorder of Land Titles" and one Commissioner of Claims. The Recorder was to receive and record the titles and claims to lands in their respective districts: after which, the Commissioner and the Recorder jointly were authorized and required to examine and adjudicate all land claims in virtue of any *complete* French, British or Spanish grant, or *other evidence* of claim.

The *eighth* section authorized and required the Commissioner of

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(40) American State Papers—*Public Lands*—Vol. 5, p. 274, col. 2.

(41) *Idem*, p. 275, col. 2.

(42) Land Laws of United States—compilation of 1827: p. 607

each district "to collect and report to Congress at their next session, a list of all the actual settlers in their several districts, who have *no claim* to lands derived from the French, English or Spanish governments, and the time when such settlement was made."

The respective offices having been organized, that for the District west of Pearl river was located at St. Helena, and Charles S. Cosby was appointed *Recorder* of Land Titles, and James O. Cosby, *Commissioner*. This district comprised the parishes of Feliciana, Baton Rouge, St. Helena and St. Tammany.

The office east of Pearl river was located at Mobile, and William Barton was appointed *Recorder* of Land Titles, and William Crawford, *Commissioner*. This district comprised all the former Spanish settlements from the Pearl river eastward to the Perdido.

The general principles which governed in the adjudication of the titles and claims to land in the present case, were such as prevailed in the adjudication of similar claims formerly in the Natchez district, which was equally once a portion of West Florida.

The Report of the Commissioner of the Western District comprised a list of three hundred and twenty-one Spanish, and one hundred and eleven English patents, which were *confirmed*; (43) and, also, a list of claims based upon imperfect titles, such as concessions, orders of survey, or *requetes*, from the French, English and Spanish authorities, comprising *three hundred and seventy-five* claims, which were recommended for confirmation, besides one hundred and eighty-seven which had been *rejected*, and thirty-three which were anomalous.

The report from the Eastern Board comprised a list of twenty-two confirmations in virtue of old English and Spanish grants, besides one hundred and fifty-eight claims in virtue of concessions or orders of survey. The report also contained a list of *one hundred and fifty-two* claims which *ought not* to be confirmed, besides one hundred and fifty-five claims belonging to persons who had lost or mislaid their title papers. (44)

The number of actual settlers in this district who were registered, was one hundred and seventy-four.

In August, 1819, the Boards of Commissioners were superseded by regular Land Offices organized at St. Helena and Mobile, conformably to the provisions of an act of Congress approved March 3d, 1819, and entitled "An Act for adjusting the claims to land, and establishing Land Offices in the districts east of the Island of Orleans."

The *first* section ratified all titles and claims derived from complete Spanish grants, and complete titles emanating from the British authorities in West Florida prior to the year 1783, which had been confirmed by the Commissioners of both these districts.

The *second* section ratified and confirmed, in like manner, the decisions of the Commissioners in favor of claimants under incomplete titles from the Spanish government, such as concessions and orders of survey; also, all settlement rights confirmed by the Commissioners for settlements made prior to December 20th, 1803, and reported to Congress.

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(43) American State Papers—*Public Lands*—Vol. 3, p. 35 to 44.

(44) *Idem*, p. 45 to 62.

The *third* section ratified and confirmed all decisions made by the Commissioners in favor of actual settlers, for 640 acres, in virtue of settlements made prior to the 15th April, 1813.

The *fourth* section granted a *donation* of 640 acres to every actual settler, whose name had been registered and reported by the Commissioners as an occupant and cultivator of land on the 12th day of April, 1814.

The *sixth* and *seventh* sections extended the time prescribed heretofore for the presentation of claims, until the 1st of July, 1820.

The Land Offices, as first organized, were conducted by Charles S. Cosby, *Register*, and Fulwar Skipwith, *Receiver*, at St. Helena for the Western District, and by William Barton, *Register*, and William Barret, *Receiver*, at Mobile, for the Eastern District.

On the 18th of November, 1820, the Register of the Western District reported the number of additional claims presented under the *sixth* and *seventh* sections of the act of March 3d, 1819, as follows, viz:

In virtue of Spanish orders of survey,	122	claims,
" " British patents,	- - - 57	"
" " Actual settlement,	- - - 160	"

On the 24th of July, 1821, the Register and Receiver made their report to the General Land Office, comprising 224 claims acted on and confirmed by them to actual settlers. (45)

On the 11th of July, the Register and Receiver at Mobile made their report to the General Land Office, comprising 153 settlement claims adjudicated and confirmed by them to actual settlers whose names had been registered prior to March 3d, 1819. (46)

There are still large claims to land which have never received an adjudication satisfactory to those who were the most interested in procuring a confirmation of them through the Commissioners, and, finally, through the Land Offices and Congress. The *Maison Rouge* and the *Bastrop* claims and many others, have been resisted by the government; and so far speculators, with their subservients, have been defeated in their expectations and efforts to monopolize the public domain. Among the prominent large claims which have been perseveringly and artfully urged upon the attention of Congress for a series of years, may be enumerated the "*Winter claim*," the history of which is briefly as follows, viz:

In the year 1789, Elisha Winter, an enterprising merchant of Baltimore, emigrated to Kentucky, where he soon became deeply interested in the trade with New Orleans, under the privilege extended by the Spanish government to Colonel James Wilkinson and his agents. Soon becoming a prominent trader, he established a rope-walk in New Orleans, and enjoyed sundry commercial privileges, and undertook in 1797 to build up an agricultural settlement for the cultivation of wheat, flax, hemp and domestic stock. In this undertaking he failed, and finally abandoned his enterprise, and devoted his time to other employments.

(45) American State Papers—*Public Lands*—Vol. 3, p. 446-449.

(46) *Idem*, p. 7 to 35.

At length, in 1807 and 1808, with the aid of Don Carlos Trudeau, the former Surveyor General of the Spanish government and acting Recorder in the city of New Orleans, he began to perceive that a large landed estate in the Missouri Territory was almost within his grasp. The Boards of American Commissioners in Louisiana had been several years engaged in the arduous duties of examining and adjudicating numerous land claims of all kinds, which were accumulating rapidly upon their hands, while land-jobbers and speculators were becoming daily more expert and audacious in the preparation of new land claims for the consideration of the respective Boards.

It was at such a time as this that Trudeau discovered among the musty files of his office, a Spanish grant or concession for a tract of land, supposed to be for one thousand arpents square upon the Mississippi and White river, made by the Baron de Carondelet to Elisha Winter: also, two other grants or concessions for two other tracts, supposed to be for five hundred arpents each, made to William and Gabriel Winter, sons of Elisha Winter; each concession bearing date June 27th, 1797, together with a plat of survey, attached to the concession, and purporting to have been made October 12th, 1798. Thus the claims, admitting the order of survey genuine, called for two thousand arpents, or nearly 1800 acres of land.

But it was reserved to the former Spanish Surveyor General, with his ingenious friends and associates, to convert the claim into one of *one million five hundred thousand* acres, as ingeniously argued by Joshua G. Clarke, Esq., Attorney for the heirs of Elisha Winter.

The concession of the Baron designated the quantity in the grant to Elisha Winter, by the words, "*mil arpanes de tierras quadratos*;" and that to William and Gabriel, by the words, "*arpanes de tierras quinientos quadratos*." This possibly might have been intended by the Baron to signify a thousand arpents in square form to Elisha Winter, and to William and Gabriel each five hundred arpents in square form.

But to those interested in amplifying the grant, there could be no doubt that the former expression in both instances was designed to signify lineal measure instead of superficial; and that instead of a thousand arpents in the first concession, *one million arpents was intended*; and that instead of five hundred arpents in each of the others, *five hundred thousand arpents* was intended for both concessions.

1. The best evidence that this was the true construction of the grant, was the certificate of Henry Cassady, *Deputy Surveyor*, who, on the 10th of November, 1805, certified that the plat of survey attached, designating Elisha Winter's claim as one million of arpents, was made by him on the 12th of October, 1798, and that he, in 1802, had re-surveyed the same *in part*. (47)

2. To corroborate the certificate of Cassady, the Surveyor, *Don Carlos de Villemont*, Commandant at the Post of Arkansas, that in the year 1798, as Commandant on the Arkansas, "he put the said Elisha Winter in possession of said land, comprising *one million ar-*

perches (!!) by order of the Baron de Carondelet:" also, that in like manner, "he put Gabriel Winter in possession of two hundred and fifty thousand arpents of land; that the said tracts were designated by marking two trees for William and Gabriel, while the said Elisha marked his tract by a large stone which he brought from Kentucky; that each claimant marked for *himself*, as there was no public Surveyor in the District! Said Villemont, the Commandant, being personally present and superintending the same." (48)

The said Commandant, *on oath*, fully believes that if either of the said Winter's, before the cession of the country, had presented himself in New Orleans and demanded a completion of the grant, *a titulo en forma* would have been issued and accorded to them to the full amount of the claim.

The veritable Commandant took great interest in the confirmation of this claim, out of pure *justice* to the claimant, whose father, Elisha Winter, as he alleges, was a great favorite with the Spanish authorities.

3. *Don Andres Lopez de Armesto*, Commissary of War, &c., and Honorary Secretary to his Catholic Majesty in Louisiana, swears that among the files of his office is the original document containing the grant of the Baron Carondelet, bearing date June 27th, 1797.

4. The *Marquis de Caso Calvo*, Brigadier of the Royal Armies, &c., &c., certifies that Don Andres was Secretary to the King's government in the province of Louisiana, and that entire faith and credit are due to him. This certificate is dated New Orleans, April 19th, 1805.

5. *Godfrey Jones*, Deputy Surveyor, certifies, February 28th, 1805, that the *plat of survey* for 250,000 arpents made for William Winter, agreeably to the Baron's grant of 1797, is correct, it having been surveyed by him for said Winter. Said tract extended from the Big Prairie on the Mississippi westward to White river.

6. *Henry Cassidy*, Deputy Surveyor, certifies that pursuant to an order of survey from Don Carlos Trudeau, Surveyor General of Louisiana, bearing date 24th of July, 1802, he did on the 24th of November, 1802, carefully survey for Gabriel Winter his grant on the waters of White river, and extending eastward to the Mississippi, near the mouth of the St. Francis, conformably to the Baron's grant of 1797.

7. *Major James B. Many*, who received possession of the Post of Arkansas in the spring of 1804, testifies that Elisha Winter and family were then carrying on a farm in that district, upon the lands of his grant: that he, said Many, saw the corner stone and marked trees designating said land. (49)

8. Seven creole French men and women, former residents in Arkansas, swear that the Winter family resided on, and cultivated said lands in the year 1804.

9. *Don Luis de Onis Gonzales y Vara*, &c., &c., Envoy Extraordinary and Minister Plenipotentiary near the government of the United States, on the 6th of February, 1816, in his certificate asserted that the "Captain-General, or Governor-General of His Catholic Ma-

(48) American State Papers—*Public Lands*—Vol. 3, p. 258.

(49) *Idem*, p. 259.

jesty's American Provinces, is vested with full powers to make grants of *uncultivated* lands, in the respective provinces, to such individuals as may desire to cultivate the same and settle upon them." He also further asserted, *regardless of truth*, "*nor do I know* that the Governors are restricted to any definite or limited quantity:" also, that "the Baron de Carondelet certainly *had the right* to make a grant for the amount of a thousand arpents square: *mil arpanes de tierras quadratos*, as stated in the grant to Elisha Winter." Yet he does not assert that the grant of *a million of arpents* would have been a *legal grant*, which the King would have been in duty bound to approve and confirm, or, that the phrase in the grant should have been *rendered one million of arpents* in English. (50)

10. *M. Lafou*, not behind his colleagues in zeal for the establishment of this claim, testified on the 29th of June, 1816, that he had been a Surveyor and Engineer in Louisiana for *twenty-three* years, and that he was well acquainted with the French and Spanish languages, and with the customs of the Spanish government, and that the terms "*mil arpanes quadratos*" in the grant made to Winter in 1797, in English signifies "*one thousand arpents square of land*: and that the terms "*quienintos quadratos*," as expressed in the same grant, in English means *five hundred arpents square*.

He further testifies, "that it is a well known fact, that *arpent* in the Province of Louisiana was used to express *linear measure*:" also, "that the large grant made to E. Winter is a *square figure*, with one thousand arpents on each side, or the square of one thousand arpents; that the tract granted to William and Gabriel Winter are each *square figures*, having *five hundred arpents* on each side." He further testifies, falsely, that wild lands in the Province were deemed by the Spanish authorities of but little value, and that they were very freely granted to applicants; hence the extent of the grant of the Baron to his particular friend, Elisha Winter.

11. William Garrard, former Commissioner, and subsequently Receiver in the Land Office at Opelousas, testifies on the 18th of April, 1816, "that *arpent* was understood by the creole French as *linear measure*, just as *league* is in the admeasurement of land; and that he has often heard the French designate *distance* by arpents in their horse-races."

12. *Joseph Walker*, on the 10th of September, 1816, certifies, that he is a native of Louisiana, and was raised under the Spanish government; that he knew Elisha Winter as early as 1792, and that being a great favorite with the Spanish government he could have obtained *as large a grant* as any other man. He also certifies, that "*mil arpanes de tierras quadratos*" in the grant of said Winter, is intended to signify *linear measure*, and it is *equivalent* to these words, i. e. "*ten thousand poles square*."

13. *Don Jose Vidal*, who had been Commandant at the Post of Concord, and who had been peculiarly liberal in granting *requetes* to American citizens within the district of Concord, on the 15th of October, 1816, certifies that he has been an officer of the Spanish govern-

ment for twenty-five years; and that he well remembers Elisha Winter in New Orleans and on the Arkansas; and that *arpent* in French is equivalent to *ten French poles* in length.

14. *Mayfield Ludlow* certifies to the same fact, i. e. that the French use the term *arpent* as linear measure.

15. *Thomas Freeman*, Surveyor General, of the United States, south of Tennessee, certifies on the 20th of July, 1817, that *arpent* is a *superficial* measure, but that the *improper* use of it as a measure of length is universal among the Spanish Surveyors; and that the term *arpent* is as universally used by the people of Louisiana to express distance, as the term *mile* is by the people of the United States.—[See American State Papers—*Public Lands*—Vol. 3.]

Such is the doubt and uncertainty which may be thrown around a claim having a semblance of truth for the foundation, upon which may be reared a structure, gorgeous indeed. The Winter claim, although supported by the influence and intrigue of the many individuals of wealth and standing in the Mississippi Territory, who had become jointly interested in its confirmation, at length fell to the ground, burying in its fall, the hopes of the credulous, and the money of the avaricious. Congress persisted in rejecting the claim as unfounded and fraudulent; and those who took an interest in sustaining the pretensions of the claim, as their only recompense, shared the loss and the disappointment.

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## Art. II.—THE SCIENCE OF HISTORY.

Introduction to the History of Philosophy, by Victor Cousin, Professor of Philosophy, of the Faculty of Literature of Paris. Translated from the French by Henry Gotfried Linberg. Boston: Hilliard, Gray, Littel & Wilkins. 1832!

Though this theory had its origin in England, in the manner described; yet it was not there that its development was confined. At a very early period of its existence, it passed over into France, and took up its abode among a people much better qualified to bring to light all its hidden powers than their insular neighbors. In France it was first taken in hand by Condillac, who lost no time in putting it through all its paces, and in drawing from it all the consequences which it enclosed. Partial, bounded, and exclusive as was the system taught by Locke, it was not yet enough so for the Frenchman; half-way measures would not suffice for him; he was displeased with its complexity; it lacked simplicity and unity; it was not sufficiently exclusive; reflection had no business there; nay, reflection itself was nothing but a species of sensation; hence he suppressed entirely the insignificant part which Locke had left to reflection, and reduced the system to the single proposition, that sensation was the sole element and even the sole instrument of knowledge. In short, Condillac made sensation the sole administrator of affairs; he subjected every thing, attention, comparison, reasoning, all, to its omnipotent power; he made it the all of intelligence, and even the all of will; the all of conscious-

ness, the whole soul entirely; according to him, the soul was nothing but a collection of sensations, without unity, without substance, and without causative energy. Condillac thus furnished the metaphysics of sensation; its moral system was supplied by Helvetius, which may be summed up in these words, to wit: that it is perfectly right and agreeable to the soundest morality to do whatever affords one pleasure to do, and to avoid doing whatever gives pain. From this principle St. Lambert extracted the most positive applications, and composed from them a veritable code, of which pleasure and voluptuousness constitute the foundation, and of which personal selfishness is the last corollary. Still more: it was necessary that this morality should be politically applied; it was so applied, and the French revolution was the last corollary from this application. It was also applied to all sciences; and medicine, too, had an entirely empirical philosophy. Such indeed was the mania that seized upon the French people on this subject, that it resembled more a national saturnalia than a calm philosophical disquisition; it thence crossed the Rhine, and found an echo even in Germany, little congenial as is the spirit of that nation to such a philosophy. In that country, however, it was comparatively faint and pallid, and accordingly subjugated only ordinary minds. Its greatest representative there, was Tiedemann, who composed a history of philosophy conformable to the point of view of sensation; but its virulence was so much softened in passing through German erudition, that the system was brought back pretty much to the condition where Locke had left it.

It is not to be supposed that a system like this will entirely expatriate itself, will abandon altogether the country of its birth, without leaving behind some monuments of its existence there. And here we beg leave to correct an error of omission committed by our author. In his history of the philosophy of sensation, which in all other respects is perfectly minute and accurate, Cousin entirely suppresses the important part enacted by Hume in this episode to the great drama of Universal Philosophy. It is this omission which we now purpose to supply. In connection with this circumstance there is also a "*sin of commission*" of which our author has been guilty, and which comes the more ungracefully from one who has enthroned himself upon the serene heights of an almost supermundane philosophy; who sits the eminence like an arbiter of fate, uttering oracles of the world's destinies; who affects to look down with supreme indifference upon all that is passing below; who professes to be the philosopher, not of a nation, but of humanity; and who assumes to judge without passion, and to decide without prejudice. We allude to the injustice Cousin has done the English nation by assigning it a part subordinate to France and other continental nations, not only in the domain of philosophy, but also in the great work of civilization in general. As our own national importance is somewhat compromised, by implication, in this matter, we would willingly take up the cudgels against such an arrogant assumption of superiority; but happily we are forestalled in our championship and gladly yield the arena. The translator, in a note appended to the work, has rebuked in a becoming manner this petty trait of national vanity as well as of national prejudice, and has

amply vindicated not only the English nation, but the Anglo-Saxon race wherever found, setting forth in their proper light the great services rendered by the Anglo-Americans to the cause of civilization. We are, therefore, luckily spared any further digression on this point, and will now pass on to the consideration of our subject.

While Condillac, in France, was pushing on Locke's philosophy of sensation to its last extravagances, in England, the true and necessary result of such a philosophy was the stupendous fabric of skepticism, erected by Hume, a kind of huge battering-ram that shook for a time the minds of all Europe, and the traces of whose wrecks are not entirely obliterated to this day. The mind of Hume was eminently philosophical and in the highest degree logical; he possessed, besides, a dignity, gravity, and an elevation of sentiment and thought, to which his more volatile and flexible co-laborers on the other side the Channel were utter strangers. It was doubtless this fact, and the air of greater seriousness and of comparative moderation that pervades his philosophy, which gave it so extensive a currency and so durable an influence. While sensualism, in the hands of Condillac, Helvetius, and St. Lambert, revolted the common sense of mankind and found its refutation in its own extremities, the system of Hume, formed of the same material, stood like a solid rock frowning over the waves that dashed and broke themselves at its base. Indeed, the premises of Locke being assumed or proved to be true, all the inferences which Hume drew from them were strictly logical and irrefutable. It was not in the falseness of his logic, therefore, that lay Hume's error, but in the insufficiency of the premises from which he reasoned. This was felt and understood to be the case. The frightful results of Hume's rigid logic and unerring deductions, may, therefore, be considered to have been the immediate cause of the "honorable protestation" entered by the Edinburgh professor, in the name of humanity, against the extreme consequences of sensualism. Hence originated the school of spiritualism; for Hume's inferences could only be refuted, and the appalling skepticism they had engendered could only be arrested by introducing into the arena of disputation another element of human reason, for acquiring ideas. And in fact, it is the same with philosophy as with all other departments of human affairs; when a party has taken ground on one side of a subject, there necessarily arises another party which takes the opposite side; for, as Sir Roger de Coverly has been made to observe—"on most questions much can be said on both sides;" and indeed this seems to be a regulation as wise as it is universal; for it is only by this means that complete developments are obtained, while at the same time a wider field is thereby given to human liberty or volition, consistent with another law of creation, to wit: the law of variety or multiplicity—a multiplicity emerging from a prolific unity without destroying the latter, and again returning to the embraces of unity without losing its individual identity therein. As we have already seen, sensualism and spiritualism originally co-existed in Cartesianism, or rather in consciousness as revealed by the method of Descartes. But they existed there as embryos, *in potentia*, as it were, mere germs. Fertilized by the method of Descartes, they emerged separately from the bosom of consciousness, grew up separately

in order to give the world the full benefit of their respective capabilities; and we will presently see how, after having achieved their fortunes by pursuing independent and hostile courses, they subsequently fall into each other's embraces, and from their union spring offsprings that are destined to run similar careers.

Logic may be defined thus:—the science that explains the laws by which the human mind is governed in acquiring knowledge; or it may be described to be—the science that prescribes rules for the direction of our faculties in the acquisition of knowledge. We know not for certain whether either of these definitions be orthodox, as we have before us no class book or work of any description on this subject. Such, however, according to our conception, is the aim and intent of this branch of philosophy. Two important epochs mark very distinctly the rise and progress of this useful science, which may now be considered as very nearly perfect. One of these epochs belongs to Greece, and the other to England. Two eminent individuals were mainly, if not solely, instrumental in determining these two epochs. The first was created by Aristotle, the latter was the work of Bacon. Whatever may have been the design of Aristotle in composing his famous "*Organum*," it is certain that one great result, and perhaps only one, has flowed from it. He has therein perfected the method of reasoning by "*deduction*," that is, of drawing from the premises whatever legitimate consequences may be actually included in them; this is the triumph of the syllogism, trivial, ridiculous, and obscure as many of the forms of that famous art may seem. On the other hand, the only end accomplished by Bacon, in his "*Novum Organum*," was simply the method of reasoning by "*induction*," that is, of proceeding from particular facts, communicated by observation, to a general principle within which they are included. Deduction and induction, these are the two modes of procedure which belong to reasoning. The discovery of those two methods is all that can properly be attributed to those two famous logicians who were their respective authors. These two methods were found at the termini of their long and herculean labors, and nothing else of importance was found there. Though these results may seem insignificant when compared with the expenditure of mind with which they were produced, with the eclat which attended them, and with the vast parade that has been made about them; yet these results are in reality as great as they are apparently simple; for to them is in some degree due all that now exists in philosophy, science, and mechanics. It is true that Aristotle's logic has for a long time past been relegated to schools and colleges, and for aught we know has more recently been banished even thence; yet it is no less true that its sway over the human mind was supreme for near two thousand years; during which time nothing but his method of reasoning was known among philosophers, or was allowed to be known. Such, indeed, was the intolerance of the despotism which his *Organum* exercised over the European mind during this long period of time, that history furnishes no parallel to it, if we except religion as wielded by the church of Rome. Luther's reformation broke the power of the latter, while Bacon's *Novum Organum*, without destroying, shared empire with the former.

It was Aristotle's method of *deduction* which Hume employed, and

with which he drew from Locke's apparently just and innocent premises consequences so frightful that they threw into wildest commotion all the thinking minds of his day. Appalled by these consequences, the Scottish philosophers, Reid and Stewart, were induced to attempt a rigorous application of the *inductive* method of Bacon to the science of mind. Discarding hypothesis, they adopted *psychological* observation as the only true method in intellectual and moral science. By psychology is meant, an analysis of the *internal* organization of human reason. By this process the Edinburgh professors were enabled to discover a class of *intuitive* ideas which never could have been given by *physical* observation alone. These worthy professors, however, did but little for this branch of philosophy. The leading trait of their minds is good sense; but simple good sense must not be confounded with science. Good sense is the basis of science; it is the true point of departure, and it is also the point to which science must return; but something more than mere good sense is required to develop a science to its utmost capabilities. Therefore, all that can be said of the labors of the Scottish philosophers in this department of science is, that they gave to it its first impulse. Passing thence into Germany, that land of earnest meditation, it was there taken in hand by one of the greatest reasoners of any age, one not inferior to Aristotle himself and to whom indeed he has been thought to bear a striking resemblance.

If the German spirit were repugnant to the philosophy of sensation, it was in the highest degree congenial to that of spiritualism. Indeed, the affinity was complete. Hence we find this spiritual people hailing enthusiastically the advent of the new philosophy, and giving themselves up to it with that perfect *abandon* which characterized the French nation in the respect to the opposite principle. It was the illustrious Kant who, in Germany, acted the father confessor, or rather the arch inquisitor to the new philosophy; who tortured from it all the hidden secrets it contained, and then wrought them into a system of skepticism far deeper than that of Hume's, which he had refuted. Not content with demonstrating what Reid had assumed, Kant went very much further. Immersing himself wholly within the profoundest depths of human consciousness, Kant made a complete system of the statistics, and of the interior laws of thought. Having enumerated, described and classified them, he then followed them from out their dark, labyrinthine depths into the light of day; traced them in all their legitimate applications; made them account to him for his own existence, for the existence of the world, for the existence of God, for the existence of all things; and sought and found also the manner of their application to morals, politics, jurisprudence, religion, *et cetera*. Such was the mode of Kant's psychological researches, and such were the uses to which he applied the laws of thought which that method had revealed to him. Fichte was a disciple of Kant; but with greater consistency, he went even beyond his master. He rescinded ontology from philosophy, and aggrandized logic and ontology at the expense of every thing else. He made out the universe to be a mere system of logic, and all concrete existences to be logically demonstrable from data supplied by human thought. He placed God in the centre of every man's soul, and made God the principle of life;

that is, that this subtle, mysterious, and indefinable principle which we call life is God manifesting himself in every individual man as well as in every other description of individual existence; from which we are to infer that the universe, all orders of creation, are nothing but the modes of God's existence. If we have interpreted this philosopher aright, we profess ourselves unable to discover in what respect his doctrines differ from Spinoza's celebrated system of pantheism. What this pantheistic system is, we will see hereafter. We believe, in point of fact, that all the different schools of philosophy that have existed in France and Germany since the time of Spinoza, have reproduced to some extent (it being merely a question of more or less) the pantheism of that great metaphysical geometrician, who demonstrated metaphysical propositions according to mathematical rules. Nevertheless, the disciples of Fichte have undertaken, by means of his principles, to demonstrate the truth of Christianity, and contend that the existence of Jesus Christ, as a divine personage, is conceivable to human understanding upon no other terms whatsoever. We know not if even Spinoza's pantheism, or any other of the forms under which it has reappeared, be necessarily hostile to Christianity. If the philosophies be true, and if Christianity be true, then of course they are susceptible of being reconciled upon some ground, for truths never contradict each other. All we will undertake to say is that this reconciliation has not yet been made, and that it will require a much deeper and more comprehensive eclecticism than the one produced by Cousin, to effect it. Positive science is of such a nature as to compel belief in spite of any thing the church can do; hence, after first proscribing each one of the physical sciences as it made its appearance, the church ultimately found her account in seeking a friendly compromise. But we are digressing, and becoming altogether irrelevant—let us return.

Here, then, spiritualism was consummated. Beyond this point it could not go. In the system of Fichte, it had reached the height of that sublime extravagance to which it was necessary it should attain in order to meet its ruin, just as sensualism had destroyed itself by arriving at its last consequences, at the very extravagance of baseness, by asserting that the soul is nothing more than a mere collection of sensations, and that God is nothing but a general abstract idea perceived by the senses. Nothing more now remained to be done for spiritualism but to perpetuate its memory; that is, to find for it an historian who, taking it at the moment of its highest action and most perfect developement, should bring it in connection with all other systems of philosophy that had preceded it, and in this honorable association to give to it an historical existence which should never perish. Such an historian could be found only in Germany, the land of profound erudition; and such an historian was Tennemann, who by his vast learning superabundantly fulfilled this necessary condition. Thoroughly imbued with the ideas of Kant, Tennemann composed a history of philosophy from the point of view of spiritualism, reproducing therein the philosophy of Kant. As Tennemann saw only with the eyes of Kant, and thought after his fashion, he of course made his history as partial and as exclusive as was the philosophy itself whose memory he thereby consecrated; and this, indeed, was neither to be deplored nor

avoided; it was as necessary and as useful as it was inevitable and unavoidable. And now it becomes necessary to return once more upon the past, in order to make it account to us, not only for the condition in which, at this precise juncture, we find our subject, but also for the step forward which it is about to make in its future career. This short review, too, we hope, will serve another purpose; it will serve to inspire us with a proper respect for the "new science" whose cause we are advocating; for it will reveal to us the fact that it is not an ephemera, a parvenu of a day's growth, which, because it appeared to-day will disappear to-morrow. On the contrary, from the next few paragraphs we will learn that the "Science of History" has already age and standing sufficient to recommend it to our politest attentions; that it is in fact already historical and traces its genealogy through many generations.

The first attempt to write an universal history, upon scientific principles, developing a plan in the life of humanity, belongs to the seventeenth century, and its author, Bossuet, belonged to France, "the eldest born of the church." The seventeenth century, when this design was put in execution, was precisely the culminating point of the church's supremacy in Europe. So exactly indeed had its meridian then been reached by the church that, as one may say, the very next moment of time shook it from its zenith and gave to it a perceptible declivity on the other side. Just then, however, it seared its brand upon humanity by giving to it an universal history of the race conformable to its own peculiar and exclusive point of view. The church teaches that the world was made for man; that man was made for religion, or for the service of God; that Christianity is the only true religion; and that the church is the only legitimate interpreter of Christianity. A theologian and a high priest of the church, Bossuet could do no otherwise than make Christianity the centre of his system, around which all the other elements of humanity should revolve as satellites, subordinates, subsidiaries, mere aids to the one great and only end for which man was created—hence the character of Bossuet's *Universal History*. This was the first step of the genius of history, and as such it was necessarily weak and feeble; for Bossuet barely exhibits the faintest outlines of a plan superficially treated in every respect; seeing as he does every where but one element, religion; and but one people, the Jewish nation. Though religion be not the only element of humanity, yet it is the first to exhibit itself in the life of a people; for humanity, like an individual, in its infancy is credulous and much addicted to faith, at that tender age, while reason is yet in abeyance, and destitute of experience, it accepts of revelation and leans upon authority—hence there is a peculiar fitness, an analogical propriety in this beginning of the history of humanity. But as it was the first step, it could not be the last.

The next effort of this kind is due to the eighteenth century, when the State was supreme and acknowledged no authority beyond itself. Next to religion, the church, the ritual of worship, in the development of the human mind, comes the State, government, laws. The latter is but a change, a transfer of authority. It is a substitution of human for divine authority, in which the latter is still retained, though in a subordinate, modified form. It was necessary, therefore, that the his-

torian of humanity, at this period, should be a jurist—hence Vico, who, in his "*New Science*," or Universal History, according to philosophical principles, considers all things from the political point of view and who, therefore, made religion and all other elements of humanity subordinate to the State. Vico's plan is very simple, and of course very defective; but imperfect as it is, it nevertheless exhibits in the life of humanity, or rather in the life of nations, a well defined plan, in obedience to which the existence of every people is governed. In this respect the system of Vico stands in bold relief by the side of the dim forshadowings of a plan which is barely perceptible in Bossuet's celebrated "Discourse." Vico, therefore, has been not inaptly styled *the Father of the Philosophy of History*. His plan is simply a circle, of which he has determined all the points with precision, like the hours marked upon the dial plate of a clock. This circle is made to serve equally all nations, peoples, and ages; all are made to travel round the same unvarying track, like a blind horse in a mill, or like the index over the face of a clock, until the funeral knell of each in its turn is tolled which consigns it to the grave, when its place is occupied by another who passes through the same phases and then dies as did its predecessors. Vico has marked upon this circle three prominent points or epochs at equal distances from each other. His technical phrases are somewhat unique. With that peculiarity which characterizes his vocabulary of names throughout, he has given to these three epochs the singular prenomens of envelopement, developement, and decay; and these again are considered under two general terms which he calls "*corso*," and "*ricorso*;" that is, the perpetual and necessary returns of these three degrees; that is, every nation, in whatever age of the world's history or in whatever quarter of the globe it exists, no matter for its geographical position, or for its antecedents, or for any other appliances, every nation without distinction must pass through the three epochs of envelopement, developement and decay in precisely the same order, and with no greater or less results attending the rise and fall of one than of another.

The first of these epochs is the religious age, improperly called the age of barbarism. In the earlier stages of humanity, man was necessarily governed by a species of theocracy in the shape of fitchism and polytheism; because, being unacquainted with the laws of nature, every striking phenomenon which in any way influenced his conduct, his comfort, or happiness, was ascribed by him, through that awe and adoration so peculiar to ignorant and uncultivated people, to some divinity. Thus, among all primitive and ignorant people, every mountain and valley, river and fountain, forest and sea had its presiding deity. From fitchism to polytheism is the first stage, and thence to monotheism is the consummation of the religious age which constitutes the epoch of envelopement. During this long period, in which religion rules, the legislators are, so to speak, Gods, that is, priests; it is in every people the age of divinity, and corresponds in the individual with that age which extends from infancy to early manhood.

[TO BE CONTINUED.]

## ART. III. — PRODUCTION, ETC., OF SUGAR IN THE UNITED STATES.

1. Of the qualities of various soils, and their adaptation to the production of cane, and of their exposition, North and South side of the river.
2. Of the preparation of the soil for planting, ditching and ploughing,
3. Planting, and cultivating.
4. Of seed cane, time of cutting, and mode of preserving it.
5. Of grinding, and making sugar in open kettles: defecation with lime, purging, cooling, &c.
6. Of the apparatus for making white sugar, its costs and advantages.

The treating of any of the divisions of the above subject with sufficient details to make it useful to the practical farmer, would require the space of a volume. To abridge such disquisitions, and present them in a condensed form, convenient to the general reader, would admit of so little development as to deprive them of their chief usefulness. A *mezzotermine* will be more agreeable to your readers. I will therefore be as brief as the subject and my loquacity will permit. I have thought it proper to group together the whole process, to begin with the preparation of the soil, and finish with the manufacture of the product ready for market, on account of the necessary connection between all the parts, and which will be easily appreciated by those conversant with the matter. The good old proverb "that the old way is the best," must yield, in this instance, to the fact, that vast improvements have been introduced of late years, which those who are the most tenacious to ancient forms and usages, are forced to admit, and in many cases are guilty of putting in practice. It is worthy of remark, that in no occupation are improvements so slowly introduced as in agriculture. And this arises, in part, from the prudence which characterises the class of men engaged in it, who are over-cautious not to risk the well earned price of their labor, in experiments. A great difficulty in the way of improvements, is the want of proper observations, which nobody can make but the planter himself, and which would cost him nothing but the trouble of making them. I would respectfully suggest to the planters to keep a book in which would be noted down daily all that is worthy of record, during a certain period of years. The subjects to which they should direct their observations need not be pointed out, as they will naturally suggest themselves, and should embrace every circumstance and casualty which may result to the benefit or detriment of the planter.

The most prominent, however, are, the weather, the variations in temperature and its effects on the growth of cane, the various sorts of plowing, the late or early planting, the quality of the seed cane, planting deep or shallow, how the cane in various conditions is affected by drought or too much rain, planting the rows wide apart, or crowding the cane nearer, &c., &c. One of the important facts to be ascertained would be whether there is any particular mode of culture by which the cane could be made to ripen early. Experiments could be made in a small way on the farm, with very little or no expense, and without risk until an improvement is well established. I am far from recommending the adoption without examination of every new Utopia. On the contrary I would consider it the height of impru-

dence to adopt new theories, however plausible they may be, the propriety of which would not have been demonstrated by the most positive experiment in all cases. At the same time these experiments should be made with care and exactness. It is seldom that they can be sufficiently determined in one year. They should be repeated two or three years in succession. The difference in the seasons, and many unforeseen and at first unappreciated circumstances, may modify the results that are obtained. The science of planting appears simple because it is practised by the greater part of the population, and many uneducated and very primitive people, but it is far from being devoid of art, and perhaps no other science requires the knowledge of more facts, and more observations. No better proof is needed of it, than that in different countries and climates the same plant is cultivated in a very different manner. Practical planters may be found, however, illiterate and uneducated, possessed of much knowledge in their particular art, and which it would require much time for a scientific man to acquire. It often happens that one neighbor adopts from another, something new, the result of observation, of which he would have been deprived without communication. The most knowing will not be so bold as to say that he can learn nothing more. If all the observations made by every one could be collected in a body, it might be possible to deduce from them some good system.

It is with this view, availing myself of the offer of your pages extended to contributors, that I present my own observations with comments and shall be happy to know that, after having contributed my mite, I shall have elicited inquiry directed in a proper channel to obtain useful information.

I. — *Of the Various Qualities of Soils, and of their Adaptation to the Production of Sugar Cane, and of their Exposition North and South side of the River.*

The principal Sugar region of Louisiana consists in a strip of land on both sides of the Mississippi, from Point Coupee, the most northern part, down to the mouth of the river. The soil is of a uniform quality, being rich alluvial deposit from the waters of the River before the making of the embankments or levees. It is generally of mixed clay and sand, and vegetable mould, but in many places the sand predominates, and it is then called, *light soil*. However, those three characteristics are found combined in various degrees, and not unfrequently very distinctly marked on the same plantation. It is known that in all alluvial soils, the sand being the heaviest body carried by the water is deposited first, and the particles of dissolved clay and vegetable mould being held longer in suspension, are deposited in places more distant from the bank of the stream, when the water is less agitated. When before the embankments the river overflowed its banks, the water flowing from the river met with obstructions causing capricious meanders, wherever a stream was established there was a greater deposit of land, and the land was a little more elevated, making what is called in the country, *coteaux*, or highland. This kind of land never has water lying on it, except in accidental inundations caused by a

break in the levee. It is distinguishable by a peculiar growth of trees which do not flourish in the lower lands, such as magnolia, oak, mulberry, &c., &c., with some cypress. The lower lands which are covered more or less with water, during a great portion of the year, are almost exclusively cypress.

The land uniformly has a gentle inclination from the river, giving thereby a great facility for draining. It is all equally well adapted to the growth of the cane. It is pretended by some persons, that the sandy soils produce a better quality of sugar, and the cane ripens earlier upon them. The difference, however, is thought to be very small. They have other advantages, perhaps more important. They are of more early cultivation; not so liable to be rendered compact by a beating rain; requiring less draining, as the water escapes by filtration; and not liable to become too hard for ploughing, in a dry season. The objection to those soils is, that they are not so rich, and that they are sooner exhausted. The stiff, or clay lands, are richer, and with proper preparation are equally friable, unless there be an excess of rain. As they are more retentive of moisture, they are frequently too wet and soft to plow, during several days after a shower. They also require more ditching, as the draining must be made by the surface, when on the contrary, the sandy soils drain very quick by filtration after the excess of water has run off.

There is considerable difference in the climate between the upper portion of the sugar region, and the lower, or parts nearer the sea and lakes. Upon an average the difference of time in the appearance of the first white frost in the fall between Point Coupee and New Orleans is about ten days. And for places near the sea and lakes, the difference is perhaps greater. It is a general saying among the planters on the Mississippi that there is a difference between the north and south side of the river, the cane on the north side freezing earlier. There are particular situations on points, on the same side, where the cane is affected later than in others. In the Parish of St. Charles on the right bank of the river the cane was not sufficiently affected by the frost in 1846, to be hurt, as late as the 25th of December, whilst it had been completely frozen three weeks, not more than 20 miles higher up on the same side. The plantations in that parish on the right bank are nearly surrounded by water, having the river in front, and in the rear extensive marsh prairies and lakes. It is supposed that the vapors arising from the Mississippi, carried over the fields by the north wind afford some protection to the cane. How the vapors rising from the marshes which are in an opposite direction, affect the cane, must be accounted for in another way. Perhaps it is by intercepting the rays of the rising sun until the frost is melted, thereby avoiding the sudden change which would take place were the sun to strike the plant while it is yet frozen. It is a remark that has been made in gardening, that plants are measurably protected from the cold by sheltering them from the rays of the morning sun. All the planters agree in the remark that the cane freezes most and is earlier affected by the frosts, in the parts of the field that are nearest to the woods. The hypothesis that it is the mist rising from the river which affords the protection appears plausible. It would be curious to ascertain the

true cause, but the most important to the present inquiry, is, that the fact is established by universal observation.

It is maintained by some planters that the best exposition for the rows of cane when they are wide apart, would be north and south, as they would then receive the rays of the morning and evening sun in full; whereas, if the rows were laid off east and west, a portion of the cane would necessarily be shaded by those intervening with the ray of the sun. However it may be, it is not always possible to lay off the rows in any given direction, because it is necessary to follow the inclination of the land to admit of draining by the open furrow between the rows. But in this as in many other matters, no accurate observation has, to my knowledge, been made.

The soil of the land of the Mississippi may be said to be inexhaustible. It is all alluvion, consisting of a mixture of clay, sand and vegetable mould to a considerable depth, and as has been said by an intelligent planter who has written on the subject, the only thing necessary to renovate it, is to plow a little deeper, and turn up fresh soil. In Holland, where land is more valuable than it is here, it is renovated after producing grain crops, which are the most exhausting to the soil, by digging deep ditches side and side, and filling the first with the dirt taken from the second, and so on successively, until the whole field had been gone over. The difference between this and deep plowing, is from the greater to the less; it is the same thing, to wit: turning up new soil.

The ground should be well broken up before planting, and as the cane is generally left to ratoon for two years, it is only the third year that the breaking up or plowing in full can be repeated. Let every successive plowing be a few inches deeper, until the soil is exhausted to as great a depth as the plow can reach conveniently, then some other plan must be resorted to. But by the above process, taking care to make a rotation of crops on the soil, it is believed that it would remain good at least during a man's life time. There are other ways of renovating exhausted soils, very successfully put in practice. When the cane is cut for the mill, the tops are thrown into the middle furrow, and during some leisure time, covered up by running a furrow on each side. The sooner it is done the better, so as to bury the tops while they are yet green, thus returning to the earth, not only a portion of what has been taken away from it, by the roots of the plant, but also what the plant has drawn from the atmosphere by its leaves. Some planters who have done this, affirm that the lands are enriched instead of being impoverished, notwithstanding a continuous cultivation of cane only. The fertility is restored also to exhausted soil, by suspending the culture of cane for one year and sowing a heavy crop of peas on it in the month of May or June. They grow very luxuriantly, and make a matted bed of vines and leaves from one to two feet in thickness, with a plentiful crop of peas if planted in good time. The ground being shaded thereby during the hottest months of the year, the action of the heat of the sun is diminished, and there is less evaporation of the vegetable substances in a state of decomposition falling on the ground. The moisture thus retained on the earth is favorable to the decomposition of those substances. The pea vines bear

a much more extended foilage in comparison with the dimensions of their roots than any other plant, hence their capability of extracting more substances from the atmosphere, particularly carbonic acid gas by the leaves, and phosphates by the fruit. In proof of such hypothesis the example may be given of a small yellow vine very common in the country, which derives its nourishment entirely from the atmosphere. It will thrive being suspended in the air by a thread, blooms and bears seed, and when dry, leaves solid ligneous matter. In truth it has those qualities in common with most, if not all kinds of mosses. Consequently wherever they grow they yield to the earth substances which form vegetable mould, without having taken anything from it, and therefore add to the fertility of the soil. The experiments of chemists have shown the reason why grain crops exhaust the soil so much, is, that more is taken away from the earth than is returned to it, and particularly the phosphates, or bone earth. The dried stalk of the grain or its husk contain nine tenths of silica, and grain will yield seven tenths of phosphates. If exhausted soils are merely suffered to rest for a few years their fertility will be restored, particularly if cattle are turned upon them to graze. Lands that are renovated in any of the above modes will re-produce cane very finely.

The sugar planter could easily procure large quantities of very good manures from the Bagasse coming from the mill, and the large quantity of cattle that are indispensable to a farm. Not much attention, however, has been paid to it so far, as the planters prefer clearing the land from which they take their wood. The fresh lands thus obtained do not produce well until they have been drained for some time, and been previously cultivated in corn for one or two years. The cane grows very luxuriently upon them but does not ripen early enough.

## II.—*Of the Preparation of the Ground for Planting, Ditching and Plowing*

The usual mode of draining is to make ditches running perpendicularly from the river to the lowlands, at the distance of one or two arpents apart, and from two to four feet in depth, with cross ditches of the same dimensions at a distance of four or five arpents, the dirt from the last being thrown on the lower side to make a road, with bridges over those that are intersected by it. Besides these, it is usual to make cross ditches of about one foot in depth and breadth, at a distance of about one hundred feet apart, which do not interfere with the plowing, as the plow passes over them. Such ditching is amply sufficient in the light or sandy soils where a great part of the draining is accomplished by filtration. But I apprehend that in the clay soils something more is necessary. I have frequently remarked that in old plantations the squares formed by the principal ditches, have, by defective plowing, become hollow, when the reverse ought to have been the case. The land should be plowed for the purpose of draining, by following up and down its inclination. When the plowman enters on a piece of land to plow it, he begins by laying off a strip of convenient size, say twenty or thirty feet in width, leaving the ditch on his left hand, and, coming up the next furrow, throws the dirt

towards the ditch. So that every successive plowing raises the land towards the ditch, and increases the hollow, thereby preventing the water from running off laterally. It would be just as easy to reverse the plowing and produce the contrary effect. But besides this, I think it would be advisable to plow in such a manner, in breaking up the ground (the first plowing) as to leave it in beds of about twenty feet in width, taking care to make the last furrow very deep, or even deepen it with the spade if necessary, so as to allow a free intersection with the small cross ditches. By this means there would be no portion of the field of a greater length than 100 feet and of a greater width than twenty feet but would drain into a ditch. The importance of this draining on the surface will be felt when it is recollected that in the compact clay soils no filtration takes place. It may be seen in the fields after a rain, that the water will lie in a furrow a few feet distant from a deep ditch, until it is evaporated by the sun. The effects are, to keep the earth wet too long a time, and to scald the roots of the plant when the water is heated by the sun.

By plowing as above suggested for several years in succession, the middle of the space of 20 feet would be raised to a ridge, and facilitate much the draining which, on such lands, must necessarily be made on the surface.

No one will, I dare say, contest the necessity of draining. As very appropriately remarked by one of your contributors, it takes away from the earth the superabundant moisture coming up from below, by absorption or capillary attraction, and permits it to be earlier heated by the sun in the spring, thereby accelerating vegetation. This is important, as it gives the cane more time to grow and mature. There are planters, however, who think that cane planted in the whole of the month of March will turn out as well as that which is planted earlier. This is evidently an erroneous opinion, founded on incorrect observations, and perhaps from the circumstance that, early in the season, in the months of May and June, there is very little perceptible difference between that which is planted several weeks later and that which comes up as soon as the frost will permit. I have had occasion to see it last year in a field where every third row had been left out, and which was afterwards filled up, but yet in good time. When the cane began to have joints, the oldest was about one foot higher, and appeared to have kept as much ahead as there was difference of age between them. But yet this is not perhaps sufficient to determine the question as to which would turn out the best; it would be necessary for that purpose to plant two pieces contiguous, which would receive exactly the same culture. If we were permitted to judge by analogy with the effect of late or early planting on corn, there would be no doubt that late planting, that is the first of April, would retard the maturity of the cane at least two weeks. That much time in the fall about the time of the grinding season would be very important. Hence the propriety of accelerating vegetation as much as possible early in the spring, and thorough draining is one of the conditions first necessary.

The effect of ditching may be plainly seen in the cane field by the appearance of the cane on the sides of the ditches, where the dirt thrown up makes a little elevation, and where perfect draining is

effected by filtration, the distance from the ditch being only a few feet. In such cases the cane is much larger and in a more thriving condition. And the remark holds good not only for a wet season, but also for the driest, from which it must be concluded that the moisture coming from below is injurious to the plant. It may be objected that the cane is larger on the side of the ditch because the ground is made richer by the mud thrown up from the bottom in cleaning it out. It is no doubt true that the ground is thus enriched; but I have to say in answer to the objection, that I have planted cane in an old field, that had not been cultivated for twenty years, where the ditches had not been touched, and I made the same observation that the cane was much larger in the row on the side of the ditch. Now, there is no reason why the whole field could not be made to produce as well as that single row.

The soil, deprived of its moisture, will admit of being saturated to a greater depth by rain water, which carries to the roots of the plants the chemical substances the most necessary to their growth. The principal among these is, the carbonic acid which it takes from the atmosphere, so greedily absorbed by plants. It dissolves in the earth substances which are, and can be absorbed by the roots, only in a liquid form, as has been shown by the experiments of chemists. Now, if the ground be not well drained, the moisture from below will rise by capillary attraction to within a few inches of the surface, which will be more or less dried by the heat of the sun. In this condition of the ground the rain water will only penetrate so far as it will meet the water from below, and the excess will run off; consequently giving less nutriment to the plant than if the porosity and dryness of the soil had admitted a greater quantity to penetrate. It is for this reason that the subsoil plow is so necessary in the clay lands. If it be run in the furrow which is opened to plant the cane, to a depth of several inches more than the ordinary plowing, it opens the compact soil below so as to admit of filtration, and the superabundant water seeking its own level, will follow the furrow and ooze out into the cross ditches. If the ordinary plowing be four or five inches, and the subsoil plowing as much more, it makes a depth of eight or ten inches which will be perfectly drained in the immediate neighborhood of the foot of the cane. This is probably deeper than the roots of the cane will reach. Let it be understood, however, that the depth here spoken of means that much below the surface if it was smooth, being much more if it be considered that the cane is hilled up to at least six inches above the surface, the dirt for that purpose being drawn up from between the rows, and leaving a hollow where it is taken from. This furrow should perhaps be, when the cultivation is finished, of an even depth with that of the subsoil plow, so that the height between the hollow and the hill around the stalk of the cane, will be near twelve inches, allowing the cane to be three inches in the ground, and hilled six inches, making nine inches. In this condition the excess of water will run off from the surface in the open furrow between the rows, and by filtration, in the furrow of the subsoil plow, immediately under the roots.

The operation of plowing and preparation of the ground for planting, is the most important branch of the process, and does not receive

sufficient attention. It is generally done too late in the winter, and the earth not turned over to a sufficient depth. It ought to be at least five inches, particularly in stiff lands. The usual mode is to plow each way alternately, the mould-board throwing the dirt off on either side, leaving open furrows at the distance of six feet. It is in these furrows, afterwards opened or widened with a Flucker plow, that the cane is planted. Such plowing is evidently defective. The plant cane is put immediately upon firm, compact ground, that has not been stirred, and is as much below the surface as the depth of the plowing. The furrow where the cane is thus planted is the lowest part of the plowed ground. If there be excess of water, in seeking its own level it will lie in the bottom of the furrow immediately under the cane, and cause it much injury in a wet season. Moreover, the roots will not find any nutriment in this hard soil, where they could not spread. If the season be very dry, the stirred earth will become dry, being but a thin layer, and the roots not penetrating deep enough, will not reach the moisture which they would have found, had the layer of stirred ground been loosened beneath them. It is expedient, then, that the plowing should be done in such a manner as to avoid these inconveniences and to secure all possible advantages: that is, to place the cane in such a situation that it will not suffer, neither from the excess of water nor the want of it. In the first place, it should be planted above the surface, or what was the surface before plowing, leaving several inches of stirred ground underneath, through which the water could escape by filtration; and in the second place, it should be sufficiently covered to prevent its being exposed to suffer by a drought, and not too much to prevent vegetation. A covering of between two and three inches would probably be sufficient. In order to plant the cane at such an elevation, it would be necessary to throw up a ridge on the right hand of the plow, by running three furrows on each side. If the rows are not to be more than six feet apart, the intervening space between the rows would all be broken up by the six furrows. If they were to be more than six feet apart, the six furrows would still answer, if time were pressing, but it would be better if the whole were plowed up.

The best time to break up the ground is in the month of December, so that the earth turned up may be exposed to as much freezing weather as possible. The effect is to cause it to crumble and become friable. That is the condition the most favorable to the growth of plants, allowing the roots to spread freely in every direction. Land thus prepared, especially clay land, is not so liable to become hard in the spring, and in fact it will not become so, unless there be a great deal of hard, beating rain. Care should be taken not to plow the ground when it is too wet. The soil of stiff clay lands is somewhat porous, and will admit of compression. The clods raised by the plow, if dried immediately by the sun, would become as hard as unburnt bricks, and it would require a great deal of rain to melt them. If the season should continue to be dry after such plowing, the bad effect of it is plain. The ground should not be plowed unless it be sufficiently dry to crumble, or at least not to form into large lumps. The stiff lands that are turned over early in winter become extremely friable,

and generally remain so throughout the season, thus giving great facility for the cultivation of the crop, and procures the advantages already mentioned of being more permeable to rain water and the moisture of the atmosphere which reach the roots through the open pores. The after plowing I shall have occasion to speak of in treating of the planting and cultivating of the cane.

The plows used are often badly constructed, and used out of time and place. They require to be of different models according to the quality of the soil, and the ends to be attained. I would suggest that for breaking up in stiff lands the shear of the plow should be narrow, so as to admit of plowing deep without straining the teams. In lands that are matted with roots of grass it requires four mules, with a Jacob's plow, the most approved model, to plow to the depth of four inches. If the plow was narrower, the same force would admit of going deeper. It would be more convenient to diminish the width of the plow than to increase the team, which would become unwieldy. The point of many of the patent plows is made too sharp; that is, the angle of elevation from the point upwards, is not sufficiently great. The consequence of it is that the clod is pressed against the mould-board before it is detached, causing a considerable resistance in the draught. If the point from the angle were more obtuse, and the mould-board thrown a very little further back, the clod would be raised more perpendicularly upwards, and detached before being thrown aside. The strip of ground turned up by the plow is in the proportion of four inches in thickness to ten or twelve in width. The plow enters in the form of a wedge. If the direction of the force of the wedge be from below upwards, it is clear that the strip of ground is more easily detached than if the direction was lateral. Both directions must be combined to a proper degree, which I think very difficult to hit upon without actual experiment. The practical plowman will very readily perceive the difference between the ordinary plows and one constructed on the above principles, and so will the mules that have it to pull.

### III.—*Planting and Cultivating.*

The operation of planting is very simple. It consists in laying down, in the furrow prepared for the purpose, as has been said above, the seed cane, and covering it over with loose dirt to the depth of a few inches. It may be planted at any time in the winter or spring, and as late as sometime in April: and I have seen tolerably good cane produced, planted as late as the first of May. But when it is planted so late, it also ripens later. In such cases it is left standing for the last cutting, or is put up for seed cane. When planted in winter it should be covered a little deeper to protect it from freezing, and early in the spring, some of the dirt may be scraped off with the hoe to let it come up freely. If a heavy beating rain should fall before the cane has come up, it is well to run a light harrow over it to loosen the soil, even at the risk of breaking off some of the young shoots. In old lands the cane ripens better, and may be planted in rows six feet apart, where it does not grow very large, and placing two or three canes side by side in the furrow. Care should be taken to separate

them so that they should not be in contact. If they were, some of the buds that would be turned downward could not come up. If the seed cane used, are ratoons, the knots of which are nearer together, two canes would be enough. In new lands it is well to give the cane more space, either placing the rows eight or nine feet apart, or at six feet, leaving out every third row to be planted in corn. The richer the land, the farther apart they should be planted, to give them air and sunshine. When they are too much shaded by their own foliage, they do not ripen well. There are several advantages obtained by planting the rows wide apart. It admits of plowing between the rows with a two horse plow, and it diminishes the number of rows to be cultivated, causing an economy of labor. The cane grows larger and heavier, compensating in size for the reduced number. In ordinary seasons there would be very little difference in the yield of an arpent planted at six feet, and the same planted at nine, or at six, leaving out every third row. There would be an economy of a third of the work of the hoe, which is long and tedious, and somewhat less plowing also, as frequently when the ground has been previously well prepared, it is sufficient to run one or two furrows on each side of the cane for the first plowings. Besides this, the odd row left may be planted in corn, without any or very little injury to the cane. The corn comes to maturity and withers away early in August, before the cane has attained half its size. Peas may also be planted in the corn row at the last plowing, with advantage, either for a crop of peas or forage.

The proper selection of the seed cane is a very important matter, particularly in old lands where the cane does not grow very large. The custom of many planters, to put up their worse cane for seed, is one attended with consequences that are surely not well considered. It is a fact universally admitted, that plants continually reproduced from the same seed, in the same soil, tend to degenerate. The change of seed from distant places is beneficial to the crop, but in the case of the sugar cane it cannot be done, on account of its great bulk. The costs of transportation would be too great. This tendency to degeneration would be measurably remedied, if not entirely avoided, by selecting the largest and most vigorous cane for seed. It would, perhaps, not be going too far to say that the plant might be improved by a constant attention to this practice. It is a thing familiar to all gardeners and cultivators of grain, that the most forward and largest seeds are selected for planting. There is no reason why the same rule should not obtain with regard to the sugar cane. It is possible and probable, that the ripest seed cane will yield the most forward crop. The calculation of the planter who puts up his poorest cane for seed, is to send so much of the good cane for grinding to make sugar. Accurate observations during a few years would convince him of his error. If I am not mistaken, the cultivation of indigo was abandoned in this country on account of the degeneration of the plant. The quality of the product had ceased to be as good, and the crop became precarious.

The cultivation of the cane should commence as soon as it has sprung up out of the ground. Two conditions are essentially necessary to its flourishing, to keep it free from grass, and that the ground

should be stirred about the roots. The first plowing should be done with a small plow, the mould board turned off from it, in order not to hurt the young plant, and to run as near as possible to the roots. The next furrow should be run, turning the mould board the other way, so as to throw the dirt back into the first. At the second plowing one furrow more should be run, making a space of about two feet in width, of stirred ground on each side of the row. By this time the cane will be high enough to allow throwing the dirt to its foot. A larger plow should now be used to hill it up, turning the mould board towards the row, and avoid unnecessarily cutting the roots, if the ground be in good order, by passing at the distance of at least one foot. A part of this operation, however, will have to be done by the hoe. There should be no hesitation in cutting the roots, if it were necessary to be done to put the ground in good order. The dirt thrown to the roots protects them against the drought, or too great heat of the sun in the months of May and June, before the leaves have grown large. Later in the season it contributes to sustain the cane, and prevent it from being blown down, an occurrence which is not unusual. It is particularly necessary when the ground has been well plowed, and is friable to a certain depth. For this reason: some planters pretend that it is better to plant the cane in firm ground, where the roots will sustain it better. The evils of such a way of planting have been pointed out, and not counterbalanced by the sole advantage thus obtained. When the operation of hilling up is finished, there should be at least one foot of the cane imbedded in dirt. The higher it is, the better will the rattoons be protected against the cold. The ground sometimes freezes to the depth of two or three inches. The buds that are near the surface are killed, but there are enough left for a good stand. It is important that the last open furrow between the two rows should be deep enough to drain off the water from the rattoons. It has been observed that they are more liable to freeze when the water lies about them. In the spring the ridge is cut down a few inches, to facilitate the shooting up of the buds; and the top of the ratoon, which is frozen, cut off smooth with the ground. This should not be done until the latest white frosts; otherwise, if it was severe, it might kill the buds entirely. If the frost is light, it causes very little injury to the cane that has come up, merely burning the leaves to the edge of the ground. Last year might have been seen the evil consequences of not hilling up sufficiently high. The winter was very mild, and the rattoons sprung up several inches in height. Severe frosts successively cut them down and killed most of them. There were not enough left for a stand when the spring came, and in some places they were almost entirely destroyed, and not worth cultivating. Prudent planters always keep a sufficiency of plant cane to guard partially against a contingency of this sort. Although it may be remarked, that the rattoons are not often affected by the frost, yet, it is sufficient that it may occur once in four or five years, to warrant some precaution to preserve them, in case of an unfavorable season. In light, sandy soils they are much better preserved than in stiff lands, which is, no doubt, to be attributed to more perfect draining in the first.

An experiment has been made by a planter, which consisted in

plowing late in the season, when the cane was quite large, running the shear of the plow next and close to the foot of the cane, so as to cut the roots. A few rows only in the piece were plowed in this manner, and the balance in the ordinary way. He remarked a few weeks afterwards that the cane in the rows thus plowed appeared longer and in a more thriving condition. A single experiment of this kind is, perhaps, not sufficient to warrant the practice. There are many circumstances to be taken into account; such as the manner in which it may be affected by the subsequent sort of weather, etc., which should be carefully noted, and particularly if it do not retard the maturity. The advantage of stirring the ground about the roots of a plant is obvious. The pores being open, the roots spread to a greater extent and absorb a greater quantity of nutriment from the earth. The roots may absorb in a given time all that the earth contained in their immediate neighborhood, that was of a nature to be assimilated to the plant. If, in this condition the roots are cut, and the ground disturbed, they spread out again very quickly into new unexhausted soil. The growth of new roots is very rapid when the plant is large, and the looser the soil, the more is their sphere of action extended. Hence it may be inferred that it is erroneous to suppose, as some do, that it is injurious to a plant to cut the roots and stir the ground in a very dry time. If the soil is dry and has not been stirred for a long time, their action is null; because their functions require moisture, and the soil about them is exhausted. Then no harm is done by cutting them, if the plow throws up some moist earth from below, in which the roots may spread anew, and they besides find some moisture coming from the night dews which penetrate more or less through the pores of the freshly stirred earth. If at this time there should come a shower, it finds the plants in the most favorable condition to be benefitted by it. If these hypothesis be correct, no dry weather should prevent from plowing.

When the ground is very wet, it is not advisable to plow. As has been said already, the clods raised by the plow are liable to become hardened by drying in the sun, and it requires a great deal of rain to make them crumble again. If a dry spell should set in after such plowing, it is obvious that it would have done harm instead of good. If it should rain again immediately after, the grass will not be killed. It is better then not to plow at all.

As a general rule, after a heavy rain, the whole field should be plowed over as soon as possible. The ground is rendered compact by rain, and if too long a time is allowed to intervene before plowing, it becomes hard and is then in an unfavorable condition for the prosperous growth of plants. There is little necessity of going over the ground a second time without a shower of rain intervening between the two plowings, but generally, the field should be plowed every fifteen days until the crop is finished. The quantity of arpents which one plowman can attend is about fifteen, without taking into account the work of the hoe, which is done by another hand, but sometimes much may be allowed to one plow. The quantity of work that may be performed by the plow depends much upon the season, and the manner in which the ground has been prepared. If it should be very

wet, there is necessarily time lost; not only during the time that the rain falls, but also during the time that the ground is too wet to plow. If, on the contrary, it should be very dry during the cultivating season, one plow may attend as much as thirty arpents. The crop may then be planted in view of such contingencies. The chance of cultivating the greatest possible quantity amply compensates the loss of labor which may be experienced if a portion had to be abandoned. It would be injudicious to cultivate imperfectly too large a quantity. In case of an unfavorable season, it is best to sacrifice and abandon at once that which cannot be cultivated well. In general, it is safest to replant every year one-third of the quantity of land cultivated, although it should be necessary for so doing to destroy ratoon crops which might be good. They sometimes make very good cane the third and fourth years; but it would not be prudent to depend upon it, especially in old and worn out lands. In new lands they are better and make better cane than the plant. In either case they ripen somewhat earlier than the plant cane. In fresh lands, which are always friable, and where there is not much grass, less plowing is necessary to keep the cane in a good growing condition. But in old lands, where there is coco grass, the labor is much greater, and plowing should be repeated every ten or twelve days.

#### IV.—Of Seed Cane, Time of Cutting, and Mode of Preserving it.

The seed cane should be cut down as late as possible before the frost attacks it. But it has to be cut during the month of October, in order that the operation may be finished before the end of the month, which is the time to begin to grind. I have had occasion, on the subject of planting, to make some remarks on the quality of the seed cane, which it is unnecessary to repeat. The most usual way of preserving it, is to put it in beds, about two feet in thickness, leaves and all. It preserves very well thus, and is not affected by cold, except sometimes on the edges of the beds, and in places where it is not covered by the leaves. I have heard old planters say, that a cane frozen to an icicle will grow very well, provided it is put immediately in the ground, and not exposed to thaw. However, it does not require a very severe frost to kill the buds when the cane is standing. Some planters pretend that it is better to make the beds when the dew is upon the cane, or whilst it is wet by the rain. Others have put it up several days after cutting, when it was dry, and it has preserved equally well. There is one condition, however, more essential—it is, that it should be as full of sap as possible. If it is cut down after a dry spell, it is apt to have the dry rot, and becomes hollow, many of the buds losing their vitality. In such cases, it is better to suspend the operation, if possible, and wait for the benefit of a shower of rain. When the first killing frost comes late, and the grinding is commenced early, the tops may be saved, and make very good plant, if the cane be large. In that case, the cane is cut a little lower, so as to leave four or five well formed joints.

A very singular effect has been observed in a field where the cane has been cut down at various times, within the space of twenty or

thirty days. It is, that in some portions of the field, the ratoons have come up very well, and in others very poorly, and by patches, the whole of the field being of the same quality of land, and the cane to all appearance being in the same condition: the effect seeming to have been caused only by the different time of cutting. I saw, last year, in a field of 150 arpents of ratoons, one single spot of about five arpents that had come up extremely well, and thick enough for a good stand, whilst the balance of the ratoons on either side of the piece were very poor, and so scattering as to be scarcely worth cultivating; and they were not good in any other part of the field. There was no perceptible difference in the condition of the cane, the soil, the ditching, or the subsequent cultivation. It would be interesting to direct some observations to the discovery of the cause of so strange a phenomenon. It would hardly seem serious to attribute it to some occult influence of the moon; I say occult influence, because there is nothing in it which we can account for by any ordinary process of reasoning in such matters. There are things, however, which do not come under the apprehension of any of our senses, which still we are forced to believe. The rays of the moon are not known to possess any power capable of modifying anything above or under the surface of the earth. They have neither heat, nor moisture, nor electricity, and in fact nothing that we can appreciate, except light. Is that the agent? I put the query, but do not answer it. Is it the time of cutting, during any particular quarter or phase of the moon? What is the influence of the moonlight? It deserves an experiment.

V.—*Of Grinding, and Making Sugar in Open Kettles, Defecation, Boiling, Cooling, and Purging.*

The cane generally continues to ripen until it is frozen. The longer it can be left standing, the more it will yield. The cold weather and white frosts accelerate its maturity by checking vegetation. The time of grinding is frequently regulated by the quantity of the crop on hand, with reference to the force which the planter has at his disposal, and his means for manufacturing the cane into sugar. There are various matters to be taken into consideration. The grinding should be finished as early as possible, to give time for preparing for the next crop, such as plowing, keeping the plantation in good order, making improvements, etc., etc. If the cane is ground too soon, the yield will not be so great. These are matters of calculation which the planter should make, and combine the whole, according to circumstances, to the best advantage. In general, the operation may be commenced about the 20th of October. It is about this time that the first white frost may be looked for. By doing a portion of the work early in the season, the balance remaining to be done is more under control, in case of a sudden and unexpected freeze. It requires about two months to take off the crop when it is proportioned to the force. The vegetation of cane is not entirely checked until the weather is cold enough for ice. It should then be winrowed by throwing several rows together, laying it down carefully, so that it may be covered by the leaves. If the cane is large and well furnished with leaves, it will be sufficient to put

two rows together, but otherwise, it is better to put three or four. It can be thus preserved until it is convenient to grind it. If a warm spell of weather should set in after a freeze, the cane standing would, in a very few days, become sour and unfit to make sugar; but it will remain good as long as the weather continues cold. It causes some loss of labor to winrow the cane, and hence a small portion is always left standing, to be immediately cut for the mill before it has time to spoil. If the cane should be winrowed too early, before the vegetation is checked, it would be apt to sprout and vegetate on the ground, which would destroy the saccharine matter. It is not safe, however, to let it stand later than the 15th of November, the time that ice may be expected.

The top of the cane being the most tender part freezes first, and when it sours it begins also by the top, and comes gradually down; attention is then had to cut it off always below the part that is spoiled. The advantage of winrowing is two-fold; it protects the cane against the effects of the sun, and being in a horizontal position, the sap from the sour part does not come down so fast. It may be seen upon cutting a frozen cane in two, that the juice will ooze out from the upper surface of the cut. It may be counted a lucky circumstance for a planter to have just cold weather and ice enough to check entirely the vegetation, and afterwards a continuation of cold long enough to allow to winnow all his cane. The making sure of saving all the cane would perhaps more than counterbalance the benefit that would be derived from letting it stand a little longer to ripen. This is frequently the cause of some cane being lost, and is an imprudent practice.

In making the preparations for taking off a crop, two ends should be kept in view: letting the cane stand the longest possible time to mature, and then to grind it up in the shortest time, to save it before it is entirely frozen. Any contrivance then, by which the grinding may be hastened becomes important. The greatest labor is to get the cane up to the mill. Although the mill should be of just sufficient force to grind it as fast as it could be brought, and the kettles be of commensurate dimensions, yet some economy of labor may be introduced. In the case just supposed, there is an indispensable number of hands required about the sugar-house, to attend the engine, kettles, putting up the sugar into hogsheads, &c., &c., and that these hands must be replaced in the night during a period of necessary rest. Now, let us take for example, an establishment making six hogsheads of sugar in twenty-four hours, the number of hands will not be less than fourteen. If the mill and kettles were of double the capacity, the hands would not be proportionally increased; three or four more would suffice. The quantity of fuel would not be proportionally increased neither, as very little more fuel would suffice for the augmented size of the kettles and boilers. These augmented apparatus' could not be supplied, it is true; but let us see what would be the result of their operation. Before starting the mill, all hands could be put at the cane, and get up a large quantity in advance. The carts would continue to run until the mill should have caught up with them. Supposing that the quantity hauled up by this time was equal to 24 hogsheads, instead of fourteen hands being employed four days to

make them, they would be made in two days by seventeen or eighteen hands. The economy in labor would be equal to one day's work of twenty men, and the economy in fuel would also be very great. Many planters use four kettles only, and probably one of the inducements to it is, that they appear to require less hands to work them, and the opinion is common that the sugar is of a better quality, although no reason is assigned for it. If the size should be somewhat increased, and two large ones added, it is still but one and the same fire that would be used with a very little augmentation of fuel. The manner of splitting the wood also, is a matter of more importance than some persons attach to it. The fuel that produces the most flame is the best, because it has to pass a long distance under the row of kettles. If the combustible be of such a nature as to make coal instead of blaze, the kettle alone under which the fire is made will be heated, and that imperfectly. Now, the larger is the wood, the less flame it makes in burning. It is probable that a given number of pieces of wood of the size of three inches square, would give as much blaze as the same number of double the size. The smaller it is split, then, the further it will go. There is an economy in splitting it up small, not only in the wood itself, but also of time of boiling.

The usual way of defecating the juice is to put in the *grande* or large kettle a certain quantity of lime, such as is found by experiment to be sufficient. It requires about half an hour, when the kettles are heated and going, for the *grande* to boil, from the time that the cane juice is put into it. As soon as it begins to boil, the scum and impurities, and albumen, coagulated by heat, float on the surface and are skimmed off with a ladle. But the period of time for doing it is very short, not more than five minutes, because the ebullition at a more advanced stage causes froth, and disturbs the crust of scum which had come to the surface. It is then time to transfer the juice to the second kettle, when it has been but imperfectly skimmed. It would not be difficult to regulate the fire of the *grande* by a damper, which would shut the fire from it just at the point of ebullition and give time to skim it well. As the action of the *grande* would be retarded by this, it would become necessary to make it furnish cleansed juice fast enough for the other kettles, either to have it larger if it were convenient, or to have two instead of one. The two would probably be better, because they would take less time to boil than the large one. A violent fire to the *grande* causes scales to be formed on its bottom and sides of the impurities contained in the juice, which, by their own gravity, go to the bottom. These scales are burned to a cinder and communicate a red color to the sugar. If the fire was regulated, these inconveniences would be avoided.

It would be desirable that the fire under the battery could be regulated also, so as to be able to check it when the granulation point should have been reached, and until its contents are transferred in the coolers. The most expert and attentive sugar maker cannot always take off a strike at the proper point. He is obliged to begin to throw it off a little while before it has reached the point of granulation, because the bulk of the syrup to be evaporated being considerably reduced, and the heat greater on account of the density of the liquid

being increased, it requires but a very few minutes for the point of granulation to be passed. If, on the other hand, he waits to throw off until the proper point is reached, then the last ladle-fulls will be boiled too much. In either case, the strike taken off is imperfect; either a portion of it is not boiled enough, or boiled too much, besides which, when the last ladle-fulls are being thrown off, the sides of the kettle are left bare and a portion of the sugar is burnt. These are the imperfections to be remedied. How it is to be done, in a cheap and simple manner, claims the attention of the planters, and should excite the ingenuity of kettle setters. These craftsmen have very exalted ideas of the perfection to which they have attained in their art, when, in truth, they do nothing but random and guess-work, to the sad experience of some of the planters. It would perhaps be well to have two batteries instead of one, and have them so arranged that by checking the fire to attain slowly and surely the exact point of granulation, and to throw off the strike without burning the sugar.

It is usual for the sugar-makers, (to use their expression) to run upon several *bacs* or coolers; that is, to throw the strikes taken off into four or five coolers successively. The consequence of such a practice is that layers a few inches thick are formed, on the top of each of which there is a hard crust, which retains the molasses, and which is so hard when the sugar has granulated that it is impossible for the molasses from the upper layer to run through it. They say, and it is true, that if they were to fill one single cooler at once, by throwing several successive strikes into it, that the sugar would remain hot too long in it, and would continue to cook and be cooked too much. No better proof need be adduced that the boiling is carried too far. It necessarily reddens the sugar and creates molasses, or a substance that is not crystalizable. If those layers above mentioned were not formed in the coolers, the molasses might be in great part taken out by making holes at the bottom, which would carry it by a gutter to the cistern. The sugar thus treated would contain much less molasses when put into the hogsheads to drain, would drain better, and, consequently, be of a brighter color. By putting molasses and all into the hogshead, that which is on the top has to run through the whole of the hogshead, a height of about four feet. Now, the work of crystalization is going on while the molasses is yet present, and portions of it are absorbed with the water of crystalization, and attach also to the sides of the crystals, giving to the sugar a red color. Hence it is that sugar becomes of a brighter color by liquoring. The liquid which is put upon it, usually syrup of a low density, displaces the molasses and coloring matter in the sugar and takes its place. Chemical analysis, if I recollect right, shows that sugar contains about forty per cent. of water.\* If that liquid be limpid and colorless, the sugar will be white. A proof of the correctness of the above hypothesis is that the tops of the hogsheads, which are the soonest free of molasses, are always of a brighter color, and some almost white, and are a choice quality of sugar, whilst the other parts of the hogshead are darker and more damp, and the bottom remains always an inferior article. The vices of the system,

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\* Quere ?— [Ed.]

then, are apparent, and may be easily remedied, with little trouble and expense, by a slight modification of the present contrivances, in accordance with the principles above set forth. But, after all, were all the defects remedied which I have and have not pointed out, and that sugar-making be rendered as perfect as it can possibly be, it is a question whether the new apparatus for making white sugar are not preferable for plantations of a sufficient magnitude to warrant the expense. The consideration of these requires more exact observations than I have made, and more precise data than I possess. The use of them is attended with a great economy of fuel, a matter which is important for lower Louisiana, where the wood is daily becoming more scarce. The quantity of wood which they consume, is something more than one cord per hogshead of sugar, whilst, by the old process, it requires about three, and often more. It is asserted that they produce more weight of sugar from the same quantity of cane. The late numbers of De Bow's Commercial Review contain some valuable articles on the subject. But the curious inquirer would do well to visit the establishments in actual activity, which are well worth a visit.

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#### THE POST SYSTEM.\*

As our country expands, and its circle of business and correspondence enlarges; as civilization progresses, it becomes more important to maintain between the different sections of our country a speedy, safe, and cheap intercourse. By so doing, energy is infused into the trade of the country; the business of the people enlarged and made more active, and an irresistible impulse given to industry of every kind; by it wealth is created and diffused in numberless ways throughout the community, and the most noble and generous feelings of our nature, between distant friends, are cherished and preserved, and the Union itself more closely bound together. — [*Report of Cave Johnson, Postmaster General, December 1847.*]

THE early history of this institution, and its establishment in England, so far as we have been able to trace it will be found in a previous number of the Review. Our purpose now is to present in as brief a manner as possible, the laws and regulations by which it is governed in other portions of Europe and in the United States particularly.

And first of France. Louis XI sometime about 1476, established a line of Posts for the speedy conveyance of letters through the kingdom. It does not appear, however that the accommodation of the public was at all regarded in this arrangement, devoted as it was exclusively to the service of the State. From the period when the nation became independent of the Roman dominion, up to the time of which we speak, we have no evidence that the system was in operation, so far as the government was concerned. How long the King's service required the exclusive monopoly of the Posts has not been clearly determined. We are informed, however, that for some time previous to, and in 1630 a comptroller of Posts and Postmasters was appointed, whose duty it was

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\* In the second number of the 3d volume of our Review, the paper was commenced, of which this is a continuation. The time of the writer has been so unceasingly employed as to prevent an earlier recurrence to the subject. The authorities consulted at that time have availed him in his further investigations.

to receive the revenues. The Minister Louvois, under the reign of Louis XIV, in 1676, farmed out the Posts to a man named Patin, to whom was entrusted its entire regulation. This idea was probably taken from England, £10,000 having been received by that government from John Manly, Esq., as early as 1652 for the postage of England, Ireland and Scotland.

In 1695 an unconditional sale of the Posts was made by auction, the revenue of which was estimated at that time at 2,000,000 francs. The length of time comprehended under the sale can only be inferred from the fact of the establishment having been taken under royal management in 1738. The clear income which it produced in 1791 was 11,000,000 francs.

In 1829 the revenue from the Post office in Paris was estimated at 4,310,000 francs. Forty thousand letters were daily sent into the interior and abroad, of which 30,000 paid postage. Of the number that arrived daily amounting to 30,000 only 18,000 paid postage. From this then it appears that the number of letters which yearly arrived and were sent from the Post office at Paris were not less than 25,550,000 equal to about one half the number of letters passing through the United States mail.

From the time of Louis XV to a late period the general intendants of the Post office Department in France were selected from persons of the highest rank as is the case in Spain, and Italy. In 1808 a work entitled the *Instruction Generale Sur le Service des Postes*, was published for the guidance of those to whom this branch of the service was confided, and is we believe still in force. All the mails are accompanied by couriers of responsible character (*Service des Malles*) employed to transport money and individuals.

Upon a single letter the French postage is very reasonable, the highest price to any part of the kingdom being one franc. The increase in the price of letters with the increasing weight, however, is otherwise; the ratio of the French, being in proportion much heavier than the English system. "Recommended" letters even pay double. Patterns of goods are charged one third of letter postage, newspapers into the interior pay but four centimes a sheet, and out of the kingdom eight. The Prussian system of 1824 was quite different from this. Printed matter, prohibited from being carried in the public letter mails, was transferred to the baggage wagons of the government.

Every postmaster is required to take an oath to preserve the inviolability of letters. The secret police, however, seem to be endowed with the privilege of breaking seals at their discretion, which they frequently exercise to a great extent. Letters sent by the commercial couriers from Paris to London, in 1825, are known to have been broken open.

As an evidence of the increase of speed which modern science has enabled us to attain, we may remark here that, in 1792, the time consumed in making the journey from Paris to Lyons was ten days. But three days was occupied in 1829. The history of the Post system in our own country exhibits much stronger examples.

The post offices in France are discontinued as soon as it is ascertained that the revenue does not amount to 4000 francs. This practice, if engrafted upon our system, would cause the destruction of a

great number of offices, and be a source of considerable inconvenience to a large portion of our citizens.

The letter carriers in Paris number about 400. They deliver letters six times a day during the week, and five times a day on Sundays and holidays.

#### FRENCH POST OFFICE.

##### *Estimated ratio of Distances.*

40 kilometres (about 25 miles) inclusive (2 decimes) about 4 cts.			
From 40 to 80 "	- - - - -	3 "	" 6 "
" 80 to 150 "	- - - - -	4 "	" 8 "
" 150 to 220 "	- - - - -	5 "	" 10 "
" 220 to 300 "	- - - - -	6 "	" 12 "
" 300 to 400 "	- - - - -	7 "	" 14 "
" 400 to 500 "	- - - - -	8 "	" 16 "
" 500 to 600 "	- - - - -	9 "	" 18 "
" 600 to 700 "	- - - - -	10 "	" 20 "
" 750 to 900 "	- - - - -	11 "	" 22 "
" 900 and above -	- - - - -	12 "	" 24 "

##### *Estimated ratio of Weight.*

Under 7 1-2 grammes (about 1-4 ounce)	- - - - -	1 postage.
From 7 1-2 to 10 "	1-3 " - - - - -	1 1-2 "
" 10 to 15 "	1-2 " - - - - -	2 "

and so on for every five grammes half a postage additional.

We come now to PRUSSIA. The rule of charging postage upon letters at their place of delivery, whether prepaid or not, is invariably applied, and may be noticed as one of the peculiar features of the system, which prevails under this government. The charge is regulated by *distance* and *weight*, as in France. The average number of letters daily received in the Berlin postoffice is 8500, and those sent through about 9000.

##### *Scale of Postage according to Distance.*

A distance of 2 miles, 1 silver grosch,

From 2 to 4	1 1-2 "	"
" 4 to 7	2 "	"
" 7 to 10	2 1-2 "	"
" 10 to 15	3 "	"
" 15 to 20	4 "	"

and so on calculating one silver grosch for every additional 10 miles.\*

##### *The scale of Weight is as follows.*

From 3-4 to 1 loth†	1 1-2 postage,
" 1 to 1 1-2 "	2 "
" 1 1-2 to 2 "	2 1-2 "

and so on, an additional charge being made for every increased half loth in the weight. For letters that do not exceed in weight 3-4 of a loth, but single postage is paid.

\* One German is about equal to 4 3-4 English miles.

† Two Loths make one English ounce.

The travelling Post furnishes the means of conveying silver from one point to another. The rates established are entirely distinct from those which govern other postages. Drafts and gold pay half the postage charged for silver.

A singular fact is related by Thomas Raikes, Esq., in his "City of the Czar," strongly corroborative of the degree of watchfulness which appears inseparable from all governments founded upon the principles of despotism. A gentleman attached to the Russian Embassy requested Mr. R. to take charge of a letter for the Grand Duchess, Helen, to be delivered as soon after his arrival as might be convenient to him. With as little delay as possible he despatched his servant with the packet, instructing him to deliver it into the hands of her Imperial Highness, Chamberlain. Had it been infected, this worthy functionary could not have recoiled with greater horror from the touch, or have refused more absolutely to receive it. To be relieved of his trust, he found it necessary to declare his name and exhibit his passport. By some, this extreme caution has been ascribed to a dread of unpleasant intelligence, but to what cause soever it may be attributed, we cannot but regard it as the relic of a barbarous age. The embarrassments of which it may be well conceived to be the occasion among themselves, and the offensive feeling it produces in the minds of foreigners, should long since have furnished the arguments for its overthrow. But it is too often the case that "they who live upon hope, die fasting," and the application in this case is not without its moral.

To those who may have become obnoxious to the government, or in the slightest degree have incurred its suspicion, the General Post in Russia is the cause of unceasing anxiety and disquietude. No seal is held sacred, and unless foreigners are particularly guarded in their allusions to political events, they are likely to involve their friends in serious embarrassments.

Although Russia is twice as large as all Europe, with a population of over forty millions, the revenue from her postal establishment does not exceed \$600,000. The rates, however, are extremely moderate. A letter of an ounce weight pays two copecks\* for every hundred versts.† This is the rule up to 1500 versts. For any distance between 1500 and 3000 versts only one copeck additional is paid, and for any distance over 3000 versts, fifty copecks. In that immense Empire letters are sent from 6000 to 7000 versts.

In DENMARK, no particular arrangement appears to distinguish the Posts, unless its management so as to produce the largest amount of revenue, may be so considered.

In SWEDEN and NORWAY, the postage is more moderate than in many of the neighboring States. Posts were established in the NETHERLANDS by the ancestors of the princely house of Taxis. In 1513 the station of Postmaster General of the Netherlands was held by Leonard Von Taxis. The Post system of England appears to have been the model which they have taken in later times.

In the LOMBARDO-VENETIAN KINGDOM, in TUSCANY, PARMA and MO-

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\* The amount of two copecks in weight of copper is little more than a cent.

† A verst is about two-thirds of an English mile.

DENA, the Post system for the last thirty years has been instituted more after the Austrian model, while it retained the French basis. They have continued the same in other States of Italy, with some slight modifications.

In SWITZERLAND, the regulation of the Posts is confined to each canton. As may be readily conceived, they are variously managed, and with more or less of merit in each. No extra Posts are to be found any where in Switzerland.

In SPAIN and PORTUGAL, the establishments are in a very low and defective condition, though a *Cerreo Mayor*, as Director General presides over them. In no State are they entirely in their infancy except in European Turkey. No change or improvement has been evident in them for centuries. Mounted Tartars are maintained by the Grand Signor, to whom all the despatches of the public authorities are confided. Remarkable celerity characterise their movements.

Having thus traced with more brevity perhaps than will be consistent with a clear understanding of the operations of the system in other portions of the world, we are brought at once to the consideration of the establishment as it exists in the UNITED STATES. As early as 1692, there appears to have been an inclination in England to establish Posts in the North American Colonies. Mr. Neal was named as the Postmaster General for Virginia, as well as other portions of America. The act passed by the Virginia Assembly, conformably with this intention was never carried into effect, however. An act of Parliament "for establishing a General Postoffice for all Her Majesty's dominions," was passed in 1770, and the first Postoffice was soon after established in the Colonies. New York was selected as the most proper location for the chief letter office, with the privilege conferred upon the Postmaster General of establishing other chief offices in such places as in his discretion should be deemed most conducive to the general interest and convenience.

Upon the adoption of the Constitution of the United States, in 1789, the power was exclusively confided to Congress, "to establish post offices and post roads" throughout the United States. Though eighty years had elapsed between this period and the introduction of the system into the Colonies, the institution was yet in a state of infancy. Difficulties of the most alarming magnitude seemed to surround every effort of the government, which, superadded to the untried energies of the people and the natural obstructions inseparable from a new and almost unexplored country, may measurably account for the very uncertain progress which marked its early career and development. We extract from Hazard's Register, under the head of "Travelling in the Olden Time," a notice which appeared in Andrew Bradford's Philadelphia Mercury, of March 1722-3.

"This is to give Notice, unto Gentlemen, Merchants, Tradesmen, Travellers and others, that SOLOMON SMITH and JAMES MOORE, of Burlington, Keepeth two stage wagons intending to go from Burlington to Amboy and back from Amboy to Burlington again, Once every Week or oft'ner if the Business presents. They have also a very good storehouse, very Commodious for the Storing of all sorts of merchants Goods, free from any Charges, where good Care will be taken of all sorts of Goods."

How is this feat of enterprise regarded in the present day? or

how would our modern carpers relish the reservation contained in the contract of the proprietors of the first line established between Bordentown and New York in 1734, to be at New York "*once a week, if wind and weather permit?*"

But every year brings its innovations and improvements. Man is progressive in his nature, and all the aids of science and of art are pressed into his service to carry out his high resolves, his adventurous daring and his brilliant conceptions.

In October, 1750, a new line was established. The owner informed all ladies and gentlemen who had occasion to transport themselves, or goods of any kind, from New York to Philadelphia, that he had a "stage-boat" which, "wind and weather permitting," would "leave New York every *Wednesday*, for the ferry at Amboy on *Thursday*—where, on *Friday*, a stage-wagon would be ready to *proceed immediately* to Bordentown, where they would take another stage-boat for Philadelphia." As an evidence of the great increase of speed which had been attained even at this time, it is stated that the passages by this route were made in less time, by *forty-eight* hours, than any other line. Hence we find it was well encouraged, passengers scarcely ever being kept longer than from *five to seven days on the route*.

The boat employed between Amboy and New York, seems to have possessed superior attractions. It is described as having a "fine, commodious cabin, fitted up with a *tea table and sundry other articles*." The stage line between Trenton and Perth Amboy, established in 1756, performed the journey in three days, and by the celerity of their movements, were modestly styled "flying machines."

We find the following in Hazard's Register for 1828:

"GENERAL POSTOFFICE, Philadelphia, February 11th, 1755.

"It having been found very inconvenient to persons concerned in trade, that the mail from *Philadelphia to New England* sets out once a fortnight, during the winter season: This is to give notice that the New England mail will henceforth go once a week, the year round, whereby correspondence may be carried on and answers obtained to letters from *Philadelphia and Boston*, in *three weeks*, which used in winter to require *six weeks*.

"By command of the Deputy Postmaster General.

"WILLIAM FRANKLIN, *Comptroller*.

"Penn. Gazette, 1755."

In a report communicated to Congress on the 17th December, 1803, by Mr. Thomas, Chairman of the Committee of Post Offices and Post-roads, will be found the first proposition for the establishment of a direct post route from Washington to New Orleans. At that time the mail was conveyed on a circuitious route to Knoxville and Nashville in Tennessee, and thence through the wilderness by Natchez to New Orleans, "a distance of more than fifteen hundred miles." A more direct route was proposed in the report to which we have referred, "to pass through or near the Tombigbee Settlement in the Mississippi territory, and thence to New Orleans."

In 1805, Mr. Jefferson, then President, in a communication to Congress, on the 1st February, called the attention of that body to a route, in progress of survey, by Isaac Briggs, one of the Surveyors

General of the United States, "extending from Washington, by Fredericksburg, Cartersville, Lower Sauratown, Salisbury, Franklin C. H. in Georgia, Tuckanbatchee, Fort Stoddart and the mouth of Pearl river to New Orleans." By reference to the letters which accompanied this message, we become assured of the almost incredible difficulties, fatigues and dangers to which the Surveyor General and his party were subjected. Travelling for days through a wilderness unmarked by human footsteps, climbing over precipices, wandering through swamps, and crossing deep and difficult water courses, sufficiently tested the patriotism of the stout hearts who had engaged in the enterprize. Mr. Briggs says: "I had an idea that I could pass through the country without a path or a guide, but when I mentioned it on the frontiers of Georgia, it was scouted and laughed at, and I am now firmly of opinion that, in this way, it would be at least a *four months* passage from *Georgia to New Orleans*."

In another letter from New Orleans, bearing date 26th November, 1804, we find the following: "On the 29th ult. we left Tombigbee, passing through the town of Mobile; we crossed Pascagoula river, passed round the bays of Biloxi and St. Louis to Pearl river, through the Rigolets and lake to New Orleans. On this part of our route (a distance of about 200 miles) we were 25 days."

The observations he had made, suggested to him the following points, to be established on the mail route; and they were accordingly submitted to Congress by the President. Fredericksburg, Cartersville, and Danville in Virginia, Salisbury in North Carolina, Athens in Georgia, Point Comfort, southeastern-most projection of Tallapoosa river (Creek nation), Mobile river, just below the confluence of Alabama and Tombigbee, and New Orleans.

Numerous suggestions have been submitted to Congress, many of which have been taken into consideration and reported upon, by the committees properly charged with all matters of reform in this department of the government. The necessity of an armed guard for the protection of the mails, was once advocated with some warmth, but reported against by Mr. Stokes, the Chairman of the Committee of Post Offices and Postroads, on the 16th February, 1819. In the previous year Mr. Ingham, from the same committee, reported against the expediency of establishing a branch of the general post office in any part of the United States.

In his first report to the Senate, upon the subject of Sunday mails, made on the 19th January, 1829, the Hon. R. M. Johnson uses the following language in reply to the axiom which the petitioners assumed, that the practice was in violation of the law of God: "It would involve a legislative decision in a religious controversy, in which good citizens may honestly differ in opinion without disturbing the peace of society or endangering its liberties."

And, again—"While the mail is transported on Saturday, the Jew and the Sabbatarian may abstain from any agency in carrying it from conscientious scruples. While it is transported on the first day of the week, another class may abstain from the same religious scruples. The obligation of government is the same to both, and the committee can discover no principle, on which the claims of one should be

more respected than those of the other, unless it should be admitted that the consciences of the minority are less sacred than those of the majority."

There is probably no intellectual achievement in the career of this distinguished Senator, which has so clearly marked his character and exhibited the great and striking characteristics of his mind. The hypothesis that the "observance of a holyday may be incorporated in our institutions," is successfully met and successfully defeated in its claims to consideration.

In the same year Mr. McKean, in his report to the House of Representatives on the same subject, argued the question more strongly in view of its practical operation. He demonstrated the disadvantages to which merchants would be subjected, and the injuries which would necessarily result to the petitioners themselves, under the operation of the system they sought to establish. The delay of a day in New York, which might frequently occur by the intelligence from England being received there on Saturday night, would start up among us a host of private expresses, which would conduce not more to the pecuniary advantage of their owners than to the detriment and injury of the community generally. While we are frank to admit that we see little difference in the application of the maxim, that "all is fair" to trade as well as to war, we are unwilling to see the government used as a means of enriching one class of the community to the positive exclusion and manifest injury of the others. But this argument, though a valid one at the time these reports were made, have lost much of their force in our day. Neither of these gentlemen had an idea of the chain of lightning, which, by the aid of science, was to encircle the land—the potent messenger of intelligence, unmatched in the celerity of its movements save by THOUGHT itself.

No practical effect can result from a detail of the various laws, by which this department of the government has been controlled, for the last fifty years. The law of March, 1799, differed but in a slight degree from that of February, 1792, of which it was a modification. In both, the postage upon all letters carried a distance of 500 miles and over, were charged at the rate of 25 cts., and newspapers for 100 miles 1 cent, and 1 1-2 for any distance exceeding that. In consequence of the necessity for an increase in the revenue, in aid of the expenses of the war in which the country had been engaged, from February 1st, 1815, to March 31st, 1816, fifty per cent. was added to all postages.

Mr. Platt, the special agent of the government, in the report made to Congress, soon after his return from Europe, recommended, among other things, the "entire abolition of the franking privilege," the establishment of only "two rates of postage for the whole Union," and that "letters should be charged by weight." He asserted that members of Congress employed substitutes to write their names, and that in the session of 1840, 4,314,948 letters were *franked*. In support of his last suggestion, he urged the injustice done to the receiver who does not always open his letters before the Postmaster, and thus single letters are frequently charged as double. A low rate of postage, in offering no inducement to evade the law, gave great employment to

the mail service, whose revenues were thereby enlarged. One-half the correspondence between Boston and New York, under the old system, never went by mail.

The Penny Post in England, for which they are indebted to the celebrated Rowland Hill, has been the means of producing much good among all classes, besides yielding a large amount in revenue to the government. The inducement which it offers to the laboring classes to acquire a knowledge of the rudiments of their language, to keep up a communication with their friends, from whom distance may have estranged them, is not the least of the beneficial results it has produced. The German Confederacy are on the point of adopting the system, and we see no reason why republican America should be behind the old States of Europe in so good a work. The fact has been previously stated, that a "money office" has been instituted among some nations attached to the general post office. Why may this not also be the case with us? The advantage of such a regulation presents itself in too strong a light to be entirely disregarded.

In consequence of the charge of full postage on the mail matter conveyed by the U. S. steamer Washington to England, the Postmaster General issued an order on the 5th November, 1847, terminating the arrangements existing between the two countries with regard to trans-Atlantic postage. This order was intended to apply as well to letters conveyed by British and American steam vessels as those in transit through the country. Conformably to this order the express from Kingston and Montreal with packages, letters and specie, for the steamer Britannia, was seized for a violation of the Postoffice and Revenue Laws, though subsequently delivered up. We trust this postal war will not be suffered to continue from any illiberality on the part of the British Government. The protest of Mr. Bancroft, the American Minister in London, to Lord Palmerston, will, we confidently hope, induce a disposition in that government for a postal arrangement, mutually advantageous to both countries.

The increase in the revenues of the Post Office for the quarter ending 31st March, 1847, as compared with the the quarter in 1846, gives the following results in some of the principal cities of the Union :

Baltimore, - - - -	\$3,118	Philadelphia, - - - -	\$3,797
Boston, - - - - -	1,508	Norfolk, - - - - -	636
Cincinnati, - - - -	1,569	Pittsburg, - - - - -	648
Columbus, Ohio, - - -	1,375	Savannah, - - - - -	714

These facts are sufficient to assure us of the success which has marked the system of low postages. As our population increases, it must be evident there will be a corresponding increase in the number of letters till this branch of the public service is made to defray its expenditures, a point to which it has already very nearly attained.

*Length of Post Routes and Cost of Transportation of the Mail in the various States of the Union.*

States.	Routes miles.	Total annual cost.	States.	Route miles.	Total annual cost.
Maine, - - - -	3,980	\$41,964	Florida, - - - -	2,958	\$45,192
New Hampshire, -	2,267	25,560	Ohio, - - - - -	11,538	172,295
Vermont, - - - -	2,486	25,563	Michigan, - - - -	4,255	38,211

States.	Routes miles.	Total an- nual cost.	States.	Routes miles.	Total an- nual cost.
Massachusetts, - -	3,478	\$107,393	Indiana, - - -	6,160	\$52,439
Rhode Island, - -	383	9,187	Illinois, - - -	8,276	102,485
Connecticut, - - -	1,820	45,698	Wisconsin, - - -	3,078	15,043
New York, - - -	13,292	292,307	Iowa, - - -	1,631	9,722
New Jersey, - - -	1,980	53,930	Missouri, - - -	7,897	49,720
Pennsylvania, - - -	10,227	155,412	Kentucky, - - -	7,705	89,581
Delaware, - - -	549	7,862	Tennessee, - - -	6,828	55,298
Maryland, - - -	2,359	133,751	Alabama, - - -	6,553	136,495
Virginia, - - -	10,782	192,615	Mississippi, - - -	4,117	58,451
N. Carolina, - - -	7,423	172,520	Arkansas, - - -	4,637	39,966
S. Carolina, - - -	4,718	118,157	Louisiana, - - -	3,208	41,795
Georgia, - - -	5,761	153,001	Texas, - - -	2,766	24,102
Total, - - -	-	-	-	153,808	1,406,848
Mail agencies on railroads, steamboats, &c, - - -	-	-	-	-	46,158
Total, - - -	-	-	-	-	\$2,453,001

The above table is abstracted from sundry documents attached to the report of the Postmaster General. The duties of this officer bring him more immediately before the people, and his conduct is thereby subjected to the closest scrutiny. To expect that he would be enabled to perfect such arrangements in the general administration of his office as to give satisfaction to all, would be demanding at his hands what no mortal has, or ever will be able to achieve. Of all our public functionaries he most needs the calm teachings of philosophy to encourage and sustain him.

It is to be regretted that no uniform system of charges upon letters by the steamships to Europe has been adopted by the several lines.

The following shows the rates of the different lines:

*American Line.—Steamship Washington.*

For each letter and package not exceeding 1-2 ounce, - - -	21 cents.
Over 1-2 and not exceeding 1 ounce, - - -	48 "
For every additional 1-2 ounce or fraction, - - -	15 "
On each newspaper, pamphlet or price current, - - -	3 "

Mail matter to Bremen, either for delivery or distribution, may be sent either with or without the postage being previously paid.

*British Line.—Steamship Surah Sands.*

For each letter weighing 1-2 ounce or less, - - -	25 cents.
Every additional 1-2 ounce, - - -	25 "

*French Line.—Steamships Union, Philadelphia, New York and Missouri, &c.*

It must be borne in mind that the rates by the French line refer to letters weighing only one quarter of an ounce. The postage to cross the Atlantic cannot be pre-paid.

Postage at the New York Post Office, - - -	1 cent.
Postage to cross the Atlantic, - - -	20 "
Postage from Havre to Paris, - - -	10 "
	31 cts.

*Postage of a letter from New York to England via Havre.*

Postage at the New York Post Office, - - -	1 cent.
Postage to cross the Atlantic, - - -	20 "
Postage from Havre to English shore, - - -	2 "
English taxation from the shore to the letter's destination, - - -	10 "
	33 "

*Packet Ships for Liverpool, London and Havre.*

On each letter weighing 1-2 ounce, - - - - - 12 1-2 ct.  
 Newspapers, - - - - - 2 "

In all cases, whether by steamer or sailing vessel, the inland postage to New York or Boston, requires to be pre-paid.

The discovery of how much weight can be transmitted by the mail for five cents, has been made by the *Philadelphia Sun*, and involves some nice calculation. We can readily credit the assertion that great pains were expended in the effort, and give the result entire:

*The Ounce Letter.*—An avoirdupois half ounce is 218 3-4 grains; wafers one grain; sealing wax, usual quantity, five grains; one sheet of foolscap weighs 172 grains; letter paper, 135; small envelopes 42 grains—large 52. You can send a letter 300 miles for five cents, containing, viz: the sheet of paper with three bank notes, sealed with wax; or the letter with three bank notes in an envelope. Half a sheet of letter paper with a half eagle enclosed under wax. A sheet with a dime and a half enclosed secured by wafers. A single sheet of letter paper with a quarter eagle enclosed, secured by wax. A sheet of foolscap in an envelope, sealed with a wafer. One and a half sheets of letter paper, secured by wax or wafer. These calculations are based upon the ordinary letter paper now in use. By using very thin French paper, a greater number of sheets go to the half ounce, of course.

The report of the Postmaster General to the present Congress, embodies much interesting matter connected with the administration of the department, for the past year. It makes no pretensions to rhetorical effort or literary display. The style is easy, forcible and perspicuous.

The routes are said to have been extended 9,878 miles since the 1st July, 1847, and the transportation in the same time 3,253,630 miles. The following statement exhibits the extent of the annual transportation of the mails, and the cost of the same:

	Miles.	At a cost of
On railroads, - - - - -	4,170,403	\$597,475
On steamboats, - - - - -	3,914,519	245,744
In coaches, - - - - -	15,299,005	912,462
By other modes, of inferior grade, - - - - -	15,593,972	650,166

\$2,406,848

The number of Post Offices in the United States on the 1st July last, was 15,146, an increase of 963 on the previous year. There were discontinued during the same period 284. The best estimate of the number of letters and papers passing through the United States mail for the last year, is as follows:

Paid and unpaid, single rates of 5 cents, - - - - -	36,152,566
do. do. 10 cents, - - - - -	12,851,532
Ship and steamboat letters, at 6 cents, - - - - -	427,800
Ship and steamboat letters forwarded in the mails from foreign countries, 2 cents added to the regular postage, - - - - -	850,980
Dropped letters, - - - - -	865,308
Printed Circular letters, - - - - -	1,025,304

52,173,480

The number of letters sent through the mail to the army in Mexico and by those entitled to the "franking privilege," is placed at 5,000,000. Of other matter there are computed to be—of newspapers 55,000,000, pamphlets and magazines 200,000.

An amount equal to about \$135,000 is annually lost to the government by the number of dead letters returned to the department. For the last year they amounted to 1,800,000.

The expenditures of the present year will exceed that of the last by \$228,333, from which sum the savings made in the contracts for the Southern section, amounting to \$108,697, must be deducted. The estimated means and expenditures of the department for the year, show a surplus of \$213,951. This is another of the gratifying features which has marked the system of cheap postage in our country.

A good part of the report is occupied with a statement of the difficulties which have arisen between the department and the Fredericksburg and Richmond Companies, touching the compensation allowed for the transportation of the mail over these routes. We cannot conceive how a diversity of opinion upon the course pursued by the Postmaster General in this particular, can be honestly entertained. The arguments he adduces in support of his position, are conclusive to our mind, and carry with them the weight of sober conviction.

We have thus sketched, imperfectly enough, it must be admitted, the leading facts in the history of this system. We have seen it in many of its phases and under the operation of different laws. But, we venture to affirm that in no age has its strides been more rapid or its achievements more grand than in our own. But a few years since, and animal power was made to yield to one of the greatest inventions which has distinguished any time. The magic power of steam supplanted all other means of conveyance to be itself subdued by the lightning swiftness of the telegraph. The philosopher of an age lost in the dim distance of antiquity, if replaced upon the earth, would fail to discern in our times the features that so distinctly marked his own. The learning of the schools could no longer impose upon his quickened faculties or delude his stronger judgment. The magic word "EUREKA," which so long hung tremblingly upon his lips when some half conceived creation of mind broke dimly through the cloud suspended over his faculties, and as rapidly retired, has found in some modern sage the boldness to give it utterance. Discovery has so rapidly succeeded discovery, that imagination is mute in dwelling on the wonders of reality, and the precepts of philosophy are lost in the energy of ACTION.

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### AMERICAN AND FOREIGN TRADE AND STATISTICS.

COMMERCIAL EMBARRASMENTS IN ENGLAND — WEST INDIA BANKS — COTTON TRADE — EXPORTS COTTON FROM EAST INDIES — FROM PORT OF CALCUTTA — PORT OF MADRAS — EAST INDIA COMPANY'S EXPORTS TO CHINA — PROSPECTS AMERICAN COTTON — ESTIMATED SUPPLY AND DEMAND — BANKS IN UNITED STATES — TRADE OF NEW ORLEANS — NOTE.

THE revulsion in English commerce was made the subject, under this head, for a few remarks in our last number. The "accounts" which have reached us since that time, are of a most encouraging aspect, so far as our conception of their character extends, though we are still left to the uncertainties of speculation for the results which are to be developed. The three great causes to which we are to attribute the difficulties and disasters which have swept over the British nation,

have been too frequently stated to require a repetition in this place. That the *panic* has in a great measure, if it has not entirely, expended its force, we religiously believe. The condition of the Bank of England, holding, as she does, over £11,000,000 in bullion, and a reserve of notes amounting to £6,500,000, sufficiently fortifies her against a reduction of interest much greater than that which has taken place. As we have before remarked, we are not of those who repose entire confidence in the Bank of England as competent at all times to arrest the difficulties which result from a diversion of capital, or of restoring the equilibrium, when the harmonious action of trade has been disturbed. That her power and resources may be so administered as to result in good or evil, cannot be fairly questioned. Such being the position of affairs, it will not fail to strike the most careless observer, that the Bank and the community must frequently be placed in antagonistic relations. And this is more emphatically true upon the approach of any great commercial crisis.

The currency of England is more largely metal than our own, though the surface of country over which it is distributed with us, would seem to require the larger amount. In France, where there is but one Bank, located at Paris, the necessity of a large specie circulation is absolutely required by the wants of the people. Hence we find the metallic circulation is equivalent to \$306,000,000, nearly all silver, an amount about double that of England, and probably three times greater than our own. A member of the French Chamber of Deputies estimated the circulation of England at 30,000,000 sovereigns. The relative position maintained by the Bank of England to the commercial interests of the community, so far as the currency is concerned, may be thus clearly seen.

In former periods, when the amount of bullion held by the Bank reached £11,000,000, the loss of interest upon so large an amount was urged as a very serious objection. May we not, then, ask with some propriety, of what possible use is so large an amount of coin held by the bank at the present time? A satisfactory reply to this question is somewhat difficult. The argument furnished to our mind by the fact is of the most encouraging character, particularly in view of what we shall seek to make apparent before we close, touching the "*convertibility*" of Bank notes. This idea of "*convertibility*" occupies so prominent a place in all the measures devised by the Ministers for the regulation of the affairs of the Bank, as to lead them entirely to disregard the lessons of experience and the plainest principles of practical wisdom. That panics are produced by this very theory is a remark so often repeated and so familiar to us all as to have passed into an aphorism. During the most exciting period in the history of the present crisis, the bullion in the Bank of England was £8,000,000, and at no time do we believe was it reduced much below this sum. The opinion is very generally entertained that the idea of convertibility, one of the leading principles of Sir Robert Peel's Bank bill of 1829, will be retained, regardless of any modifications to which the act of 1844 may be subjected by the present Parliament. The effect of this, we conceive, will be to keep in the vaults of the Bank an unnecessary amount of bullion during a period of comparative ease in the money market, to be withdrawn as soon as the indications manifest themselves of the slightest depreciation of paper issues. A doubt can scarcely exist in the mind of a reflecting man that occasions may, and do arise, when the balance of trade should be discharged in coin. The large importation of grain into England during the past year may furnish such an example. But who will be found bold enough to affirm that any law could so far have controlled the currency as to have kept the coin within the kingdom. It may be freely confessed that, when

the exchanges are undisturbed and regularly perform the functions assigned to them, the necessity for a payment in coin of any balance due from one country to another is never absolute. Coin is only necessary to restore the equilibrium in the trade of nations. It is not disputed that coin is a commodity, subject to the same operating causes which affect other products. A tyro in political economy is familiar with this principle. What then is commerce? We may answer, by defining it as an exchange between nations of equivalent products or commodities. If, then, these propositions are not disputed, and we presume we have stated them with sufficient clearness for all practical purposes, does it not follow that coin will only be exported so long as it is cheaper than other commodities, and no longer, and that a disturbance in trade must be both unusual and unnatural to call for payments in gold and silver. When this is the case, however, it is beyond the power of any institution, despite its enactments to preserve the principle of convertibility, to retain specie in its vaults. The United States is almost the only country where the imports have for any length of time been in excess of exports. Apply the principle then otherwise than as it has been stated above, and we would be poorer now, with all our vast population and resources, than during the revolution.

From the fact that coin has been crossing the Atlantic in both directions, we must infer a want of confidence, for surely a derangement in the exchanges would not manifest itself in that way.

We assumed the position in our last, that there was a derangement of CREDIT in Great Britain to an alarming extent, but the currency in the country was fully competent to all the purposes for which it is designed. The abstraction of an amount equal to £5,000,000 from the circulating medium of the kingdom, would be impotent in producing the calamities we have witnessed, were it not for the absence of credit. Indeed, we very much doubt whether even that amount has been withdrawn from the circulation. Destroy the system of credit upon which the commercial greatness of England is based, and what would become of her trade. You may sink in the blue depth of the ocean every dollar which forms the circulating medium of the realm, and but a few years would elapse ere you would see her smiling in plenty, with scarcely a thought of the past. Such is the difference between credit and currency.

In view, then, of all the circumstances, we are compelled to acquit the Bank of England of any decided agency in producing the embarrassment in the commercial affairs of England.

From our observation upon passing events in Great Britain during the last few months, we are too much disposed to regard this nation as bankrupt in purse and crippled in resources. She is neither the one nor the other. A portion of her capital, it is true, has become fixed in railroads, and her importation of grain, to supply the deficiency in her crops, has created a further demand upon that capital. But does it follow from this, that she is a ruined country? Does a man become bankrupt when, with a capital of several thousands, he exceeds for a single year his income by a few hundreds? Or, is an inability to pay in current coin, upon demand, an evidence of insolvency in one whose assets exceeds by thousands the liability he has incurred in tens? Assuredly not. And yet, what is true of an individual, is equally true of a nation.

In a debate in the House of Commons, Lord George Bentinck denied that the expenditures in railways had produced the difficulties which had been attributed to them. He ridiculed the idea that an annual expenditure of £12,500,000 should have reduced the country to the verge of ruin, and furnishes the example

of England, who, during the war with France, was enabled to spend for seven years an average of £26,000,000 yearly. From this he argues that free imports have been the immediate cause of all the sins which have been visited upon the railroads. How cheap food can draw the gold out of the country and produce such astounding results, we are at a loss to conceive. Nor are we at all enlightened by the remarks which have been made by the noble Lord, in support of his position. We cannot forbear quoting in this place from Lord John Russel:—"Unfortunately, sir, whether you have protection or free trade in this country—make your laws at your will—regulate your currency as you please—it happens that this country, when it rises to a state of great prosperity, rushes on precepitately to build a system of artificial and fictitious credit, which is sure at some moment or other to bring down depression and a revulsion of that prosperity." In the increased exports of British manufactured goods from Liverpool to the United States, amounting to £2,261,000, for 1847, over the previous year, Lord John Russel in reply to Lord George Bentinck, draws the most favorable inferences. We quote his language:—"This shows that according to the wholesome operations of trade and exchange, the food which we have brought to this country in greater quantities than usual, has been the cause of greater exports of our manufactures. It is to that export of manufactures—to the return of gold which we have sent abroad—to the state of the exchanges, and to several other circumstances of favorable augury that I look, not for the immediate restoration of prosperity, but for the gradual restoration of a better state of things, and from that to our wonted and former prosperity."

We foretold in our last, the necessity for a reduction in the rate of interest, and are at this time but poorly persuaded by the arguments adduced by Lord John Russel, high as is the authority of his name, by which he maintains the contrary.

The revolution in public opinion, by which the abrogations of the Corn Laws was affected, seems to have settled down into a state of quiescence, if we are to judge from the disposition which is apparent to bring the sliding scale into operation again. The establishment of equal representation and other measures of reform, imperatively called for by the condition of the operatives, must consequently prove as delusive as the hopes indulged, have been fleeting and evanescent.

In the condition of the West India Bank, we believe there is no cause for serious alarm to the people of England. To the shareholders it may cause slight loss, but the disposition which prevails among the merchants of Antigua to receive the notes of that branch in payment of purchases and claims, gives evidence of a confidence which is encouraging. The Antigua Observer, in some brief remarks upon the condition of the West India Banks uses the following language:—"The West India Bank is more confined in its operations, having only branches in eight of the Windward and Leeward Islands—Barbadoes, Trinidad, Tobago, Grenada, St. Vincent, Antigua, Nevis, and St. Kitts—and, therefore, requires less capital—it having paid up some 500,000 or 600,000 dollars, with a further liability on the part of the shareholders, additionally, of three times that amount, say in round numbers 2,250,000 dollars. Now it concerns the public to know that before any depositor in either of these banks, or holders of their notes or other liabilities, can lose a farthing, the Colonial Bank must lose £2,000,000 sterling, and the West India 2,250,000 dollars, which are results that may fairly be considered morally impossible.

Of unhappy Ireland we have not the heart to speak. It is enough to know that 115,929 persons died for want of food during the late famine, to enlist all the

latent sympathies of our nation in her behalf. She "possesses all the terrific majesty of Prometheus *chained* and the pitiable wretchedness of Philoctetes."

As so much has been said of the large amount of specie shipped from England during the past year, in payment of the heavy demands held against her by this country, for her importations of grain, we would barely remark, that of plain and printed colicoes alone, imported into the United States for the first half year in 1847, there was an increase of 32,500,000 yards, equal to fully 250 per cent.

ESTIMATED RENTAL, AND VALUE PROPERTY IN ENGLAND.

	Rental.	Value Property.		Rental.	Value Property.
1815....	£51,898,423	£1,200,000,000	1847....	£65,000,000	£2,400,000,000

Does this exhibit the evidences of bankruptcy, ruin and decay. We have dwelt at greater length upon this subject than was our intention, in view of the disposition, which too generally prevails, to argue from the unsettled condition of English affairs, a revulsion in our own country. We have failed to discover the slightest analogy in the cases, unless it is to be found in the almost unexampled prosperity which, during the last year, has diffused itself throughout the length and breadth of the land. Such was the condition of England immediately preceding the crisis. But prosperity was not the cause of embarrassing her commerce or of so reducing many of her merchants to bankruptcy and ruin. It was the *result of that prosperity*, felt in the eagerness to enlarge the sphere of action and extend the dominion of trade. Let us then avoid the rock upon which she has split, if we would not entail upon ourselves the consequences which have resulted so fearfully to her.

EXPORTS OF COTTON FROM EAST INDIES.

The following tables exhibit the whole amount of Cotton exported from the British East Indies, to every part of the world, from 1795 to 1845. They are taken from the returns made to an order of the House of Commons, dated 15th February 1847, by James C. Melvill, of the East India House, England. We beg to tender our acknowledgments to Mr. Simmonds, of the Colonial Magazine, London, for the original documents.

FROM THE PORT OF CALCUTTA.\*

Years.	Maunds.†	Rupees.‡	Years.	Maunds.	Rupees.	Years.	Maunds.	Rupees.
1795-96	8,895	1,47,211	1812-13	20,847	2,68,844	1829-30	3,491	34,266
1796-97	8,758	1,35,870	1813-14	2,99,193	39,92,036	1830-31	69,038	5,79,711
1797-98	10,227	1,07,711	1814-15	3,73,134	45,60,663	1831-32	53,765	4,45,766
1798-99	46,294	4,27,053	1815-16	3,26,538	38,21,475	1832-33	7,631	64,511
1799-00	6,587	90,817	1816-17	6,65,236	76,89,368	1833-34	2,340	28,325
1800-01	1,520	25,935	1817-18	10,03,363	1,10,13,074	1834-35	3,52,022	31,26,070
1801-02	810	15,160	1818-19	8,37,759	89,76,861	1835-36	7,03,178	50,28,471
1802-03	38,843	6,19,017	1819-20	2,37,435	28,33,773	1836-37	4,45,667	38,86,181
1803-04	1,84,717	23,15,185	1820-21	2,78,319	44,40,881	1837-38	2,00,119	18,13,484
1804-05	1,48,844	19,07,507	1821-22	2,39,131	34,24,311	1838-39	2,18,631	22,13,578
1805-06	2,26,385	30,44,544	1822-23	95,244	12,44,980	1839-40	1,80,538	18,33,763
1806-07	1,34,912	19,26,902	1823-24	1,58,829	23,47,568	1840-41	1,83,621	19,66,505
1807-08	1,79,726	26,07,805	1824-25	2,51,205	32,28,335	1841-42	1,12,576	12,00,093
1808-09	1,91,804	24,08,639	1825-26	2,36,141	30,57,130	1842-43	1,72,702	17,31,295
1809-10	2,81,866	39,35,461	1826-27	3,65,639	41,60,534	1843-44	2,01,497	20,25,535
1810-11	1,21,852	15,02,946	1827-28	2,16,084	32,62,862	1844-45	2,01,873	20,18,736
1811-12	1,18,175	15,91,681	1828-29	2,01,083	25,88,423			

\* The Exports are to England, France, Coromandel, Malabar, Sumatra, Arabian and Persian Gulfs, Penang, China, Mauritius, Sweden, Hamburg, New South Wales, Gibraltar and Malta, Java, Copenhagen, Lisbon, Brazil, America—none since 1819-20, Manila, Holland, South America, Ceylon, Cape of Good Hope, Russia, Batavia, Muscat, &c. Neither for Calcutta, Madras, or Bombay, are the East India Company's shipments returned.

† A Maund in Calcutta is the same as in Bengal, viz:

Bengal Factory Maund 74 lbs. 10 oz. 10 dr.

" Bazaar " 82 " 02 " 02 "

‡ A Sicca Rupee of Calcutta, the Currency in which the East India Co. keep their accounts, and which bears a premium of 16 per cent over the Current Rupee, is of the value of 2s 4d 6-25 sterling.

The returns give the East India Company's shipments from the same quarter, for certain, of the above years only. Why they are not given for other years we cannot ascertain. We give them below.

1816-17	. . . . .	Lbs.	1,002,600	1831-32	. . . . .	Mds.	8,317
1820-30	. . . . .	Mds.	7,415	1832-33	. . . . .	"	6,045
1830-31	. . . . .	"	3,203	1833-34	. . . . .	"	12,956

## FROM THE PORT OF MADRAS.

Years.	Cwt.	Rupees.*	Years.	Cwt.	Rupees.
1824-25	44,287	10,86,400	1834-35	91,595	15,79,283
1825-26	59,030	11,29,894	1835-36	2,61,325	42,85,876
1826-27	40,410	7,16,684	1836-37	3,11,043	56,55,600
1827-28	37,376	7,10,819	1837-38	64,686	9,19,261
1828-29	56,737	11,02,161	1838-39	1,71,568	30,91,982
1829-30	64,533	12,34,303	1839-40	2,13,235	37,26,927
1830-31	38,916	7,72,001	1840-41	2,44,832	40,54,811
1831-32	42,976	8,62,387	1841-42	1,14,946	65,65,540
1832-33	39,906	6,83,373	1842-43	4,10,116	62,41,740
1833-34	25,982	4,53,116	1843-44	3,41,900	54,32,222

## FROM BOMBAY.

Years.	Rupees.†	Years.	Rupees.	Years.	Lbs.	Rupees.
1801-02	39,68,180	1816-17	57,51,668	1831-32	. . . . .	88,49,416
1802-03	53,25,407	1817-18	90,18,397	1832-33	. . . . .	1,21,50,756
1803-04	42,68,685	1818-19	1,26,63,140	1833-34	. . . . .	1,47,86,550
1804-05	80,44,726	1819-20	47,11,377	1834-35	. . . . .	1,19,93,020
1805-06	75,04,113	1820-21	52,89,118	1835-36	. . . . .	1,91,70,284
1806-07	. . . . .	1821-22	47,49,319	1836-37	11,54,88,368	1,76,76,621
1807-08	90,25,238	1822-23	57,91,103	1837-38	9,74,21,153	1,39,63,673
1808-09	51,71,923	1823-24	61,92,873	1838-39	10,14,80,687	1,43,19,530
1809-10	54,17,850	1824-25	92,74,275	1839-40	9,33,17,786	1,46,46,308
1810-11	49,65,921	1825-26	1,10,90,353	1840-41	13,17,15,166	1,90,14,275
1811-12	35,22,337	1826-27	87,11,667	1841-42	16,10,26,110	2,16,79,410
1812-13	23,39,896	1827-28	1,03,28,838	1842-43	15,17,59,130	1,89,26,526
1813-14	26,14,724	1828-29	99,63,825	1843-44	17,13,67,742	2,10,58,158
1814-15	26,38,068	1829-30	82,77,129	1844-45	12,29,76,131	1,34,02,809
1815-16	53,64,959	1830-31	90,25,435	1845-46	10,90,06,628	1,11,48,357

The returns of the East India Co's exports from Bombay are given for the following years: 1816-17, 26,626 rupees; 1818-19, 29,533 rupees; 1819-20, 6,30,841 rupees; 1820-21, 2,56,216 rupees; 1821-22, 9,946 rupees; 1830-31, 21,076 rupees.

## EAST INDIA CO'S EXPORTS TO CHINA.

Years.	From Madras.		From Bombay.		From Bengal.	
	Bales.	Weight, Candies.‡	Bales.	Candies.§	Bales.	Mds.
1822-23	6,171	3,792	6,556	3,136	8,080	32,141
1823-24	7,742	4,645	16,230	7,462	25,168	1,01,120
1824-25	11,201	6,719	12,519	5,864	20,769	83,443
1825-26	7,338	4,402	13,507	6,444	19,969	80,229
1826-27	8,762	5,256	15,025	7,148	32,145	1,29,140
1827-28	12,029	7,217	22,486	10,680	22,694	91,177
1828-29	12,858	7,714	16,404	7,775	43,114	1,69,303
1829-30	13,500	8,100	15,042	7,080	21,174	85,671
1830-31	9,485	5,691	23,072	11,095	26,959	1,08,313
1831-32	. . .	. . .	18,156	8,610	18,330	73,693
1832-33	. . .	. . .	19,051	not stated	21,732	not stated

From what cause we know not, but the returns are brought no lower. It would have been gratifying could we have given them to date.

\* A Madras Rupee is of the value of 1s 11d at the English Mint.

† A Bombay Rupee is calculated by the East India Co. at 2s 3d.

‡ A Madras Candy is 20 Maunds or 500 lbs. Avoirdupois.

§ A Bombay Candy is also 20 Maunds or 500 lbs. Avoirdupois.

The imports of cotton twist and yarn and cotton cloths from England into Calcutta, have increased astonishingly within the past few years, resulting, doubtless, from the operation of the tariff law established by the British government in 1844. The total amount imported in 1846 exceeds that of the year 1841 by 12,638,406 rupees, equivalent to about \$5,813,666, computing the rupee at 46c., discarding fractions.

It has been a source of regret to us that we have been unable to gain possession of the admirable paper read before the "British Association" on the "Statistics of the Cotton Trade," by Professor ROYLE. It devotes itself, from the extracts we have seen, more specifically to India Cotton. In the Northeast Indies experiments have failed from the excessive dryness of the seasons, but with the aid of irrigation, it is thought the neighborhood of the Ganges and the Jumna, and in climates of Egypt similar to these, the plant may be cultivated successfully. Something has been achieved in the *Peninsula of India*, and the culture would be largely extended by the advance of a farthing per pound in the local market, as this is esteemed a sufficient inducement for the "ryats" or farmers, to engage more extensively in its growth. The expense of transportation, however, is very great, and we have been furnished with the example of 34 bales shipped from this District to Liverpool, at a cost of 3 1-2*d*. Originally valued at 6 3-4*d*. per pound, it will be seen how little was left to the growers. It is said that complete success has been attained in the culture of cotton in the Southern Mahratta country, and particularly near the Dharwar, under the supervision of Mr. Mercer, the American planter. The natives have extended the cultivation, induced by the experiments of government and the better prices which have been paid by the weavers. They are said to have brought 30,000 acres under cultivation last year, and by the aid of the improved gin, to have succeeded so far in cleaning the cotton, as to enhance its value greatly in the Liverpool market. The climate is like that of South Carolina—the land well adapted to the culture, and nothing seems required to make it a large cotton producing country, but a regular demand. The advantages possessed by the India cotton are its color, the readiness with which it takes color in dyeing, and its great swelling in the process of bleaching. From its being grown in a very dry climate we may infer the two last qualities. The *dirty condition of India cotton* is one of the serious disadvantages with which it has to contend, but not exclusively to the carelessness of the cultivator is this to be imputed. The *Wahkary* (or middle man) urged by the prospect of gain in the weight loses sight of the condition, as forming a part of the price, and thus adulterates it with inferior cotton, seed, fine sand, &c.

*Average price of American and India or Surat Cotton in Liverpool, and average Exports from India.*

American.	pence.	India.	Exports India.	bales.
1808 to 1821, - - - -	15 3-4a24	13 1-2a18	1820 to 1825, - - -	39,567
1826 to 1841, - - - -	6 3-8a 8 3-4	3 1-2a6 3-4	1839 to 1841, - - -	233,438
1845, - - - -	4 1-2	2 1-4a3	1846, - - -	185,119

In 1847, it is presumed, the growth will be considerably augmented.

It is maintained, in view of these facts, that, with the investment of capital and more attention to the cleaning of cotton for market, the cultivators in India, as they acquire more skill in the conduction of planting, will be enabled to contest the claims of the United States in the markets of Europe.

However lightly we may be disposed to regard these indications of the growth of cotton in India, we cannot fail to observe the very serious attention which it

receives from the English nation. In an extract from the "Manchester Examiner," the fact is presented to us that cotton of a very superior quality grown from *New Orleans seed*, was in course of shipment to that place by the East India Company from Cochin. Two samples of cotton grown in Coimbatore under the superintendence of Dr. Wright, have been received already, of a very long staple and a beautiful white color. One of the samples was slightly injured from damping, "the damp weather preventing the pods from opening at the proper season."

The prospect of American cotton, at the present time, will scarcely justify the prediction made in December last, that "the demand will greatly exceed the supply." The following table, copied from "Burn's Commercial Glance," exhibits the number of bales imported, exported, taken for consumption, and the stocks from 1832 to 1847.

Years.	Imported.	Exported.	Consumpt'n.	Stock in London.	Stock in Liverpool.	Stock in Glasgow.	Tot. stock.
1832, . . .	902,245	65,100	858,434	37,381	212,350	26,575	276,306
1833, . . .	931,796	79,066	877,589	34,102	197,960	13,058	245,120
1834, . . .	946,585	90,895	883,280	35,243	180,780	9,127	215,150
1835, . . .	1,089,309	107,240	937,616	26,296	145,311	13,953	185,560
1836, . . .	1,191,744	100,853	1,031,904	24,470	184,700	20,843	230,013
1837, . . .	1,163,839	128,535	1,064,931	60,820	204,590	23,500	289,000
1838, . . .	1,429,062	102,370	1,265,116	64,150	170,853	24,370	259,373
1839, . . .	1,109,550	121,659	1,043,511	46,450	248,349	26,300	321,099
1840, . . .	1,599,353	126,045	1,274,729	31,640	206,049	27,790	265,479
1841, . . .	1,341,659	117,330	1,118,717	50,660	366,140	27,248	464,048
1842, . . .	1,384,894	141,457	1,221,693	68,240	429,830	40,190	538,268
1843, . . .	1,556,982	121,410	1,357,662	74,570	456,600	30,234	561,404
1844, . . .	1,479,331	134,882	1,427,482	84,160	653,900	46,692	785,955
1845, . . .	1,855,660	120,595	1,577,617	91,775	740,580	61,627	902,982
1846, . . .	1,243,706	194,246	1,561,232	90,060	885,480	84,990	1,060,430
1847, . . .	.....	.....	.....	67,985	438,970	41,703	548,658

The consumption of cotton from 1832 to 1847 is here shown to have nearly doubled, while the stock from 1st Jan., 1846, to the same period in 1847, was reduced 411,772 bales, leaving on hand 548,658 bales, to form a portion of the crop of 1847-48. It must be remembered that this is not exclusively American cotton. The stocks have been gradually augmenting from 1832, if we except the year 1835, though the amount imported had rather more than maintained its annual average increase. We find the amount of cotton wool exported by England in 1846, greatly exceeds its usual proportion, as compared with previous years, while the consumption of 1845 and '46 is, with a trifling variation in favor of the former year, very nearly equal. The prices of cotton in Liverpool, as seen in the table below, will be found to have been on the advance, with a very trifling exception, from January 1846 to January 1847.

January 10, 3½a4½	March 21, 3½a4½	May 30, 3½a5½	August 8, 4 a5½	October 17, 4½a6
" 17, 3½a5	" 28, 3½a4½	June 6, 3½a6	" 15, 4 a5½	" 24, 4½a6½
" 24, 3½a4½	April 4, 3½a4½	" 13, 3½a5½	" 22, 3½a6	" 31, 5 a6½
" 31, 3½a4½	" 11, 3½a5½	" 20, 4 a5½	" 29, 3½a5½	Nov'ber 7, 4½a6½
February 7, 3½a4½	" 18, 3½a5½	" 27, 3½a5½	Sept. 5, 3½a5½	" 14, 5½a6½
" 14, 3½a4½	" 25, 3½a4½	July 4, 3½a5½	" 12, 4 a5½	" 21, 5 a6½
" 21, 3½a4½	May 2, 3½a5	" 11, 3½a5½	" 19, 4½a5½	" 28, 4½a6½
" 28, 3½a4½	" 9, 3½a5	" 18, 3½a5	" 26, 4½a5½	Dec'ber 12, 5½a7
March 7, 3½a4½	" 16, 3½a5	" 25, 3½a5½	Oct. 3, 4½a5½	" 19, 6½a7½
" 14, 3½a4½	" 23, 4 a5½	August 1, 4 a5½	" 10, 4½a6	" 26, 5½a7½

It cannot be urged that the short crop of 1846-7, was the sole and immediate cause of the advance in prices thus made apparent. It must be remembered that England was in the enjoyment of almost unexampled prosperity, with more cap-

that at her disposal than the demands of commerce seemed to require. Hence we find that, from the 10th January to 28th February, the amount taken by the trade never fell below 25,000 bales per week, though in the first week of February it reached 38,580 bales. The quantity taken by speculators during that time, averaged 6,187 bales. From 7th March to 25th April, the average of 24,362 bales were taken by the trade, and by speculators, 4,675 bales. In the last week of this period, the quantity imported was 100,727 bales double the quantity imported in any other week during the year. From 2d May to 27th June, comprising nine weeks, the quantity taken by the trade had increased by little over 2,000 bales in the average weekly amount, and that by speculators averaged 5,900 bales, though in the third week comprised in this period, 22,000 bales were taken, and in the last week but 500. From July 4th to 29th August, comprising also a period of nine weeks, the average of the trade was 28,688 bales per week, and that taken by speculators fell to 3,605 bales weekly. From September 5th to 31st October, the trade appear to have extended their purchases, which averaged 31,971 bales weekly, induced, probably, by the more reliable and authentic accounts from this quarter, of the shortness of the crop and the speculative movement which appears to have manifested itself about this time. During this period, the average quantity weekly taken on speculation was 26,810 bales. We now come down to the last period embraced in the eight weeks, from November 7th to December 26th, a period in which the speculation of which we have already seen the manifestations, was found to enlarge and extend itself. The average of the weekly trade was but 2,462, and the speculative demand 31,484 bales. So unequal, however, was the demand that, for three weeks immediately preceding the last, the average weekly amount taken by speculators was 69,266 bales. It may be well to state here that the causes which operated so powerfully against cotton the past year, make its influence of too uncertain a character to be used as a criterion in our present speculations.

Upon examination, we find that from 1st January to 17th December 1847, as compared with the previous year, the decrease of American cotton in England, has been in

<i>Imports.</i>	<i>Exports.</i>	<i>Consumption.</i>	<i>Stock.</i>
Bales.	Bales.	Bales.	Bales.
87,297	29,983	393,020	25,360

Let us see, now, if any results favorable to this great staple can be deduced from the facts which have been enunciated. With a stock of 1,060,460 bales on the 1st January, 1846, we have witnessed an almost gradual advance in price to the same period in 1847, and a reduction in the stock to 548,658 bales. It is true, the stock of manufactured goods was considered large, but that objection has no existence now. The course pursued by the manufacturers has assisted greatly in its reduction.

We have, then, for the crop of 1847-8, taking the estimates most generally admitted,

admitted,	-	-	-	-	-	-	2,300,000 bales.
Receipts in Great Britain from India,	-	-	-	-	-	-	200,000 "
" " " " Brazil, Egypt, &c.,	-	-	-	-	-	-	200,000 "
Stock of 1846, less the decrease, to 17th December,*	-	-	-	-	-	-	520,000 "

Total supply, - - - - - Bales, - - - - 3,120,000

In the estimate of the crop coming to market, we have no idea we have placed the figures at a point below what the result will establish. In the receipt of Bra-

\* The stocks in France and on the Continent are not included in this estimate, as calculated to exercise but an unimportant influence on the general result.

zil and Egyptian cotton in Great Britain we incline strongly to the impression, that the imports from these two points will not exceed our estimate. The fact of large quantities of Egyptian cotton having been diverted from the English to the French market, can have no bearing upon the question in hand. Nor do we conceive ourselves far wrong in fixing the receipts of Great Britain from India at 200,000 bales. Allowing that an increase will take place, we very much doubt whether it will overrun the 15,000 bales we have granted in excess of 1846.

We will now see how stands the other side of the account. And here we discover how far from perfect is the information upon which we must rely to assist us in our investigations. But we hazard the figures.

Demand of Great Britain,	- - - - -	1,600,000
“ of France,	- - - - -	320,000
“ of United States,	- - - - -	480,000
Exports from United States to Cuba, Triste, Hanse Towns, &c., and from Great Britain to other parts,	- - - - -	420,000
Total demand,	- - - - -	2,820,000

Thus, on the appearance of the crop of 1848-'49, there will be but 300,000 bales remaining over, the stock of the present year. Let us now seek to analyze the estimates we have made of the demand. It is but reasonable to believe that the consumption of Great Britain, the present year, will at least equal that of 1846. We say, but reasonable, in view of the low price of cotton, the reduction in the stocks of manufactured goods and the healthful tone which is manifesting itself in the English money market. Added to this there appears a better feeling in the manufacturing districts, excited by some of the causes we have enumerated, combined with the low rate of interest. Of the wants of the United States, it must not be forgotten that the consumption of the last year's crop was about 428,000, exclusive of what was manufactured south and west of Virginia. We can hardly suppose then that this estimate is too large. Of the remaining exports, we remark for the satisfaction of those who may be disposed to regard the amount as exaggerated, that according to the returns of the Secretary of the Treasury for 1846, computing the bale at 500 lbs. weight, there was exported to ports, other than Great Britain and France 337,678 bales. The hypothesis that any reduction of the stock in Great Britain, at any time during the year, would be followed by an immediate advance in prices, is not without its claims to our consideration. The system of short time, adopted by the manufacturers as the infallible preventative of high prices, does not well comport with an opposite state of things, hence we find a very different feeling prevails during low prices.

This point, we think, we have established, that on the 1st January, 1849, the stock of cotton will be greatly reduced, and that upon present rates *there must be an advance.*

In a review of the New Orleans Price Current we discover a decrease in the receipts of cotton at all the ports of 75,005 bales, as compared with last year, a marked falling off being evident in the receipts at Savannah and Charleston, in the one place of 79,371 bales and in the other of 111,935 bales. The increase in New Orleans, so far, has been something over 100,000 bales, and in Mobile 26,302 bales.

The following statements of the banks of the United States is taken from a full and extended supplement attached to that invaluable work, the Bankers' Magazine for January, 1847:

## BANKS OF UNITED STATES.

States.	Population. 1840.	No. of Banks.	Capital.	Circulation.	Specie.
New York, Country, }	2,429,000	144	19,356,000	19,270,000	2,533,000
New York City, - - }		25	24,003,000	6,967,000	6,574,000
Mass'us'tts, Country, }	738,000	83	13,249,000	10,988,000	658,000
Boston, City, - - - }		26	18,863,000	7,208,000	3,286,000
Pennsylvania, C'ntry, }	1,724,000	34	7,866,000	6,400,000	1,800,000
Philadelphia, - - - }		14	9,222,000	4,200,000	3,900,000
Louisiana, - - - - -	353,000	6	17,663,000	3,514,000	7,252,000
South Carolina, - - -	595,000	14	11,431,000	2,442,000	681,000
Virginia, - - - - -	1,240,000	36	10,502,000	7,600,000	2,566,000
Rhode Island, - - - -	109,000	62	11,023,000	2,842,000	325,000
Ohio, - - - - -	1,520,000	48	5,706,000	8,321,000	2,604,000
Maryland, Country, }	470,000	12	1,927,000	*	*
Baltimore, - - - - }		11	6,974,000	1,990,000	1,800,000
Tennessee, - - - - -	830,000	20	8,056,000	3,000,000	*
Connecticut, - - - - -	310,000	33	8,705,000	4,437,000	462,000
Kentucky, - - - - -	780,000	16	7,020,000	5,710,000	2,600,000
Georgia, - - - - -	691,000	20	5,109,000	3,200,000	1,448,000
New Jersey, - - - - -	373,000	25	3,672,000	2,400,000	600,000
North Carolina, - - -	753,000	18	3,425,000	3,070,000	1,290,000
Maine, - - - - -	501,000	23	2,859,000	2,536,000	260,000
Indiana, - - - - -	686,000	13	2,087,000	3,500,000	1,003,000
New Hampshire, - - -	285,000	20	1,800,000	4,512,000	144,000
Alabama, - - - - -	590,000	1	1,500,000	2,311,000	1,097,000
Delaware, - - - - -	78,000	8	1,390,000	*	*
District of Columbia, -	43,000	4	1,338,000	*	*
Missouri, - - - - -	384,000	6	1,201,000	1,920,000	1,554,000
Vermont, - - - - -	292,000	18	1,297,000	1,400,000	296,000
Michigan, - - - - -	212,000	3	660,000	*	*
Wisconsin, - - - - -	31,000	1	222,000	*	*
Total, - - - - -	17,063,000	753	\$208,226,000	\$116,738,000	\$14,733,000

A review of the trade of BOSTON and PHILADELPHIA for the year ending 1st January, 1847, we are compelled to defer, together with much interesting and statistical matter upon the commerce of the great and growing WEST. The trade of NEW YORK has been treated so fully under another head as to require no further notice.

Hitherto we have left too much neglected the giant advances of NEW ORLEANS, the emporium of the boundless wealth, which yearly flows from the bosom of the fertile and teeming Valley of the Mississippi. With the importance of the measures necessary to the accomplishment of the high destiny that awaits her, her citizens are becoming every day more deeply impressed. The mighty "Father of Waters," as if not unconscious of the claims of this, his favorite child, hourly pays a tribute to her power, as he sweeps majestically on his course. To New Orleans has been imputed a want of enterprise and an absence of those high requisites which constitute the greatness of all large commercial cities. This opinion can only be conceived in ignorance and persisted in from prejudice. In the courtesy which characterises man in his daily intercourse with man, many of her elder sisters may learn a pleasing and instructive lesson. Her moral standard is not by the "measure of a chopene" lower than those of her prouder compeers. In all the pursuits of life, whether professional or commercial, ability, energy and enterprise are found to characterise her citizens.

The repeated failures of the mail early in the month caused a partial suspension of business, which was but little improved until the receipt of the Hiber-

\* No returns.

nia's advices on the 3d inst., which gave an impulse to the market, and sales to the extent of 14,000 bales cotton were made.

The improvement, however, which was felt in cotton was gradually lost in the next few days, though in sugars a slight advance was realized. On the 12th, rather more animation was apparent, though prices remained about the same. The advices by the Caledonia, though considered unfavorable, but slightly effected the market. Sales to the extent of 18,500 bales were made for the three days previous to the 19th. For the three following days no important changes were evident. The anticipation of late European accounts operated unfavorably upon the market towards the close of the month, and business was otherwise much retarded by the continued wet weather. No important changes are to be noticed in prices during the month in any of the leading staples.

## CUSTOM HOUSE STATISTICS.

*Statement of Gold and Silver imported into New Orleans, during the months of July, August and September—the Third Quarter of 1847.*

Date.	Where From.	Gold.	Silver.
July 15—	Tampico,	-	970
" 20—	Liverpool, (86 1-2 sovereigns)	418	
" 24—	Do. (£636 in gold)	3,078	
Aug. 2—	Havre,	11,943	2,278
" 3—	Havana,	-	2,600
" 19—	Do.	-	2,800
" 23—	Campeachy,	-	1,500
" 25—	Turks' Island,	-	8,152
" 30—	Rio Grande,	-	15,134
" 31—	Tampico,	-	1,340
Sept. 4—	Havana,	-	7,000
" 13—	Do. (14 3-8 Mexican donbloons,)	230	2,000
" 15—	Tampico,	-	1,466
" 17—	Havana,	-	27,808
" 20—	Do.	-	6,300
		<hr/>	<hr/>
Total Gold and Silver,		\$15,639	\$79,348

NOTE.—Since the foregoing was written, the advices by the Cambria have reached us. Their commercial character is exceedingly important. Cotton had advanced 1-8d. and the monetary affairs of the kingdom greatly improved. The rate of interest charged by the Bank of England has been reduced to 5 per cent, while private Banks were offering loans at 4 to 4 1-2. The gold in the vaults of the Bank had increased to twelve and a half millions—the reserve of notes amounted to eight millions. In Manchester, the state of trade had greatly improved, and the demand for manufactured goods for China and India is said to be large and increasing. Spinners are, consequently, more disposed to enlarge the production. From the circular of Messrs. Wm. Clare & Son, Brokers of Liverpool, we gather the following particulars of the cotton trade to 31st Dec., ultimo. The imports from the United States are 117,363 bales less than last year, from West Indies 6,484 bales, and from Egypt 40,000 bales. It is greater by 23,019 from the Brazils, and 126,809 bales from India; making in the aggregate 13,919 bales less than last year. In view of these facts, it may be possible we have placed our estimates of imports into Great Britain from India, for the present year, at too low a figure. By the next steamer we will doubtless receive the annual statement of the cotton trade, reported as being out when the Cambria left. We may find occasion to make some farther remarks upon this important staple.—*January 29.*

## AGRICULTURE AND MANUFACTURES SOUTH AND WEST.

## I.—THE CHEROKEE ROSE—AND HEDGING IN THE SOUTH.—(Concluded.)

**ITS BEAUTY.**—This may not, by many, be considered an object of very great importance in a hedging plant, still it has its claims to notice and its advantages. As these are self-evident to those with whom arguments in their favor would have any weight, we shall not offer them, but pass on to the mere utilitarian advantages. The plant is, beyond question, a very beautiful one, especially when in bloom, when it forms one mass of snow-white wreaths, relieved by the rich, dark green of the leaves; and hedges of it may be still further improved, as a means of enriching and enlivening the landscape, by introducing plants of the stronger, freer-growing of the *Noisettes* and of the various running roses, at distances of thirty or forty feet in the hedge.

**FOR STRENGTH,** a well kept Cherokee hedge, of strong growth, far surpasses any other kind of live fence; and it is a more efficient protection to crops and stock than any other fence known to us. Unlike other hedges, where the stoutness of the stems of those plants of which they are formed, is the main source of strength to the hedge, this one is so bound together by the interlocking of the long shoots, which have been laid down lengthwise of the hedge, at different periods of its growth, as to be utterly impervious to any animal. We have seen a knowing old bull, lowering his head, and *closing his eyes* to the consequences, force his way through the most compact hawthorn hedges of England; but we feel confident that a well-grown hedge of this rose would turn the Buffalo. In a field thus fenced, sheep are perfectly safe from dogs or wolves, unless these enter at the gate; and hogs may be raised even close by such a neighbor as we were at one time favored with, who cursed his negroes for "a set of worthless, sleepy-headed rascals, who could not pick up pork enough o'night, in such a neighborhood, without compelling him to buy it!" The negroes, belonging to a plantation thus enclosed, find it difficult to ramble much, as they cannot cross these hedges without considerable labor and some risk.

**PERMANENCY.**—We find that plants and hedges now exist in full rigor and thriftiness, of from twenty to fifty years growth, in various parts of South Carolina, Georgia and Mississippi. No instance has come under our notice, during very extended enquiries and not a little personal observation, of any appearance of a want of permanency, or of the plant dying out from any cause. Unsightly gaps and defective places are by no means rare in even a majority of Cherokee hedges; but these are ascribable solely to neglect and indifference. One half the labor and care bestowed upon an equal number of cotton plants, would keep the young hedge in such a rigorous, growing condition as entirely to prevent gaps.

**IN FACILITY OF PROPAGATION AND AFTER CULTURE,** the Cherokee Rose equals corn or cotton. But of this, anon.

**OF ITS FREEDOM FROM DISEASE AND FROM INJURY BY STOCK OR INSECTS,** we can speak positively thus far. We may expect, however, that as the plant itself is multiplied, its insect enemies will also inevitably increase—not by *spontaneous generation*, however, but by a natural increase from a natural cause.

No degree of cold experienced in South Carolina or Mississippi affects this plant injuriously. The winter of 1834-'5 was a remarkably severe one and particularly destructive of vegetable life. We find it stated, in a very interesting retrospect of that season, as experienced at Charleston, in the 8th vol. of *So. Agriculturist*, that during "the end of the year 1834, the temperature was moderate and uniform," which "by rousing the vegetable world from its torpor, prepared the way for that devastation and havoc, which spread far and wide." This continued with no very important change. At nine o'clock, on the night of 6th February, 1835, the thermometer stood at 48 degrees. At a more advanced period of the night a very severe change took place, producing showers of sleet which fell at short intervals. "The succeeding day the weather moderated, and although cool, the influence of a bright sun rendered the temperature agreeable until towards evening, when old Boreas sent forth a chilling blast from the North-east, approaching to a pretty severe gale, diminished the temperature down to 20 degrees, at 9 o'clock, P. M. This was succeeded by Sunday, the 8th." It was the coldest day ever experienced in South Carolina, so far as recorded. "The thermometer stood, after sunrise, 5 degrees above *Zero*, leaving scarcely any doubt that it must have been at *Zero* previous to daylight. The salt-water in the docks

and mill-ponds in the neighborhood of the city, was frozen." Green-houses afforded no protection to exotics. Fig trees, myrtles, oranges, etc., etc., as far South as St. Augustine, were cut down to the roots and many utterly destroyed. We presume it was at this time that M. Noisette, whose residence and nursery near Charleston had long been celebrated for their beauty, lost his magnificent collection of Carnellias, the growth of many years—planted and nursed by his own hand—and unequalled in size and splendor. The old gentleman, in the morning, gazed upon them, all blasted and killed to the ground; and, it is said, re-entered his house without uttering a word, took to his bed and in a few days, died!

The Cherokee Rose was not affected by this sudden and severe change. It will even thrive as far North as Maryland. The late Mr. C. E. Rowand, of South Carolina, aiming at a great public good, actually distributed some hundreds of parcels of cuttings of this plant, about the the year 1820 to '23 to an equal number of his fellow farmers in the Southern States; at the same time publishing in the American Farmer directions for its cultivation, etc.; and requesting, as a very moderate return for so much trouble and expense, that the recipients would report their success or failure, through that journal. Some *half dozen* did so! Poor encouragement to others to follow the liberal example of Mr. Rowand. Through those who did report—Am. Farm., vo. 7—we learn that Mr. Wm. H. Tilghman, Plinlimman, Talbot county, and Edward Stabler, Jr., Harewood, Montgomery county, succeeded in growing the plants; of their success we have no knowledge, after the first three years. We are thus particular, to satisfy enquiries that have been made of us from Pennsylvania and Virginia, and we would be glad to learn if the rose still flourishes at these places.

We have much to say upon its ADAPTATION FOR HEDGING PURPOSES, TO THE CLIMATE AND WANTS OF THE SOUTH, AND TO FARMS CULTIVATED BY NEGROES. Fences we must have. Timber is becoming scarce everywhere; and many districts are so completely exhausted as to be, measurably, abandoned from an actual want of fencing material; the lands being too much worn, under the same wasteful course which destroyed the timber, to repay any outlay for enclosing. Timber, exposed to the weather, decays very rapidly in our climate; so that fences of that material require very frequent repairs and do not last long. The tax upon the labor of a plantation is enormous, even when well timbered; and still more, of course, where much hauling is requisite. Many of the finest plantations on the lower Mississippi have no fencing timber, and cypress pickets have to be purchased for that purpose. Great part of Texas consists of prairie, on which the plant will grow most vigorously, forming an impassable fence in a very few years; and, with the China tree (*metia azedarach*) from its hardness, rapidity of growth and excellence for fuel and other economic purposes, will be the means, we confidently predict, of settling up millions of acres of that fine country which would, without these, remain forever uncultivated, though by no means barren, wastes. Add to these the Pise, or dry clay house, and all the objections to a settlement in that magnificent stock country are done away with. Give Illinois such a plant for hedging, and a tree equal in value, rapid growth and easy cultivation, and she would quickly become the first agricultural State of the Union. As it is, notwithstanding the rigors of her climate and great dearth of timber, she makes lengthly strides towards the first rank.

The advantages of a proper subdivision of plantations by permanent enclosures, are sufficiently apparent. They are the very foundation of all improvement. The many fine tracks of hill-land, in these Southern States, which have had the cream skimmed from them, in repeated crops of cotton and corn, without other rotation and without manure, and have become cut up by gullies and stripped of their timber, might yet be reclaimed for other and highly profitable kinds of farming by being promptly hedged in before it is too late. They might then, should the owners find it advisable to move their forces on to newer and richer lands, be turned into sheep farms or disposed of to advantage for that purpose. Without fences or fencing materials they are worthless.

Of the RAPIDITY with which a PERFECT AND SUBSTANTIAL FENCE CAN BE FORMED of this rose, we will only remark that if properly planted, and tended with a reasonable degree of care, in four years a protecting fence may be dispensed with; and six years growth will render it proof against the most breachy stock.

Having thus enumerated the most prominent and valuable qualities of this plant for hedging purposes, we proceed to name the only objections, we are aware of, to its employment in that way, to any extent.

The great space occupied by an unpruned Cherokee hedge, is the principal objection made to it. But for *this* the plant should not be blamed. If planted, as it always should be, in a straight line, and not following the zig-zag of the rail fence, it can readily be kept within a reasonable limit, say with a base of from three to five feet. And the labor requisite to keep it thus within proper bounds, is not greater than is needed to keep up a rail fence; with this very great advantage, that the trimming may be done at any season of the year when the planter is most at leisure; and even if neglected for years, the only evil arising will be the temporary loss of ground occupied by the encroachment. The harbor afforded to vermin, snakes, rats, rabbits, birds, etc., is, in fact, a serious objection. The difficulty can be greatly lessened by trimming and keeping clean; and still more by providing for the negroes a few small, wire-haired terriers, in place of the great, worthless, sheep-killing, food-consuming curs, most of them are now permitted to have about their houses.

We have an anxious doubt to express, at this part of our subject, and which we name with much hesitation and after long and serious thought. It is, that the Cherokee hedge will *and does* afford protection to the cotton moth, either in its imago or crystal form, in one and most probably both of which it most certainly hibernates. We throw out this suggestion, as remarked, hesitatingly; as it may prove that we are altogether mistaken; and, in the meantime, many may be, thereby, deterred from doing that which has been already too long postponed. It will not prevent our planting some miles of hedge, this winter.

THE MODE OF PLANTING most commonly pursued, has been to make holes with a spade or other implement, under the rail fence, following the *worm*, and inserting cuttings quite close together, say every three to six inches. By this method the most of the cuttings take root and grow, being kept cool and moist by the lower rail of the fence. Others, also following the *worm* of the fence, plant a short distance from it, putting the cuttings in with a spade or grubbing-hoe. Any plan of hedging which occupies, at the very start, a space of five feet in width, is objectionable. Still more so is the crowding together so many cuttings, by which the plants are weakened at the first, and never afterwards acquire strength, even if tended, to form a substantial fence. The impossibility of tending the young hedge during the three first years of its growth, so as to give it complete possession of the ground, to the exclusion of briars, vines of various kinds, cane, China trees, etc., by which so many of those now growing are disfigured and injured, is even a more serious objection to its being crowded into the fence corners.

In order to have a strong and regular hedge, it is indispensable to have healthy, vigorous plants. These cannot be produced without *cultivation and space to each plant*. With the Cherokee Rose this is especially the case, as stout and vigorous shoots are needed from the first, that the *base* of the hedge may be composed of such. If consisting of shoots, the delicate growth of crowded plants, these are quickly choked out by those stronger shoots, which those plants that ultimately take the lead throw out, leaving the bottom and middle of the hedge a mass of dead spray.

The method of forming hedges of the Cherokee Rose, which we recommend as the true one, suggested by *theory*, thoroughly tested in *practice* and now offered as the result of *experience*, is this:—UPON A HILL-PLANTATION, already under fence, remove the fence; *grub out* every bush, briar, cane, etc., and *cut down* the large trees that will in any way shade or affect the hedge-row; upon the poorer portions apply a dressing of any manure that may be at hand; break up the ground with a good two-horse plow, bedding it, to the width of twenty feet, or as wide as practicable; run a heavy harrow two or three times along the bed thus formed, and it is ready for resetting the fence—which do to one side, so as to allow of the young hedge being tended with plow and cultivator. If the hedge-row embraces any new land, it is best to rake or burn off the leaves and twigs, or plow deep enough to mix sufficient earth with the light, leafy matter on the surface, to counteract its chaffiness. Where it crosses any low, wet spots, throw up a bank with the spade, leaving a ditch on the lower side sufficient to drain the bank to the depth of from three to four feet. Let all this be done as early in the fall as practicable.

If intended to enclose WOODLAND, to remain as such, a space of *at least sixty feet* must be cleared for the hedge-row, as this plant will bear no shade. It is not necessary to fence it in from stock roaming at large, as they rarely injure it. A range of poles, raised two or three feet upon forks, immediately over the plant, will be all sufficient.

RIVER-BOTTOM LANDS must be drained to grow good hedges. The bank of any ditch that drains the land to the depth of three feet, the contents of which form the bank will answer well. Occasional flooding of two or three days duration we have never found injurious. Standing-water, however, would inevitably destroy the plant.

PRAIRIE-LAND must be broken up *during the previous May or June*, to the width of thirty or more feet; then bed up in the fall, as above directed, preparatory to planting.

At any time, when the condition of the soil will admit, from the first of November until the first of March, but the earlier the better, plant the cuttings. These are to consist of pieces, from twelve to fifteen inches long, of *strong shoots* of the previous summer's growth, cut with a sharp knife or a pair of those stout shears, made on purpose for rose pruning and which make a draw cut—not chopped into lengths with a hatchet. This may be done during wet weather, assorting the cuttings with the tops all one way and burying them half their length in moist ground until wanted; but it is better to set them out as they are cut from the plants. If the cuttings are to be transported to a distance, they may be packed closely in a box or barrel with alternate layers of moss from old logs, made *moist* but not *wet*.

After staking out or marking with a line or otherwise, the intended line of hedge, trundle along it a wheel made of two inch plank, three feet in circumference, in the edge of which is inserted a stout peg, which of course will make a hole every three feet. Let any requisite number of hands, with spades, dig small trenches at each of the peg-marks, say fifteen inches long (across the hedge-row) ten inches wide and ten deep. One steady hand follows with a basket of cuttings, and inserts three in each trench, at least two-thirds of their length in the ground, drawing in some of the loose dirt with his foot and pressing it *firmly to the base* of the cuttings. If the soil is good, the trenches may then be filled up, by other hands following with hoes, and pressed down lightly with the foot; but if poor or thin, let the trenches, by all means, be filled up with rich compost, or cow-pen manure, from a cart which should follow the one who plants.

It has been objected to this mode of planting that it entails considerable labor and some care; and that the distance between the cuttings is too great. When the object to be attained is considered—that of forming a permanent and cheap fence, and within as short a period as possible—the care and labor requisite do not deserve a thought. If true in any instance, that *what is worth doing at all, is worth doing well*, it is assuredly true in this. The writer planted in this manner, filling every trench with compost, at the rate of fully one-third of a mile per day, with five ordinary hands and one cart. The land was very poor, yet the result is a most promising young hedge, without a gap in the whole. The increased distance between the plants is indispensable to a vigorous, hardy growth; not a tithe of the cuttings are needed; the work can be done in a much more perfect manner; and the after tending is materially lessened and facilitated.

Immediately after working over the corn the first time, throw a light farrow to the young rose plants, moulding with the hoe and carefully cutting out or covering every weed and sprig of grass. At the next tending, which should not be delayed long enough to permit any part of the hedge-row to become foul, draw out the extra plants in each trench, leaving only one, and taking care not to loosen the earth round the roots of that one in pulling out the others. The cultivator used twice and the hoes once, after this, will suffice.

At some time during the following fall or winter, let a careful hand cut off, with a sharp knife or pair of rose-shears, every sprout or shoot, to within a foot of the ground. Early in the spring bed to the plants with a good turning plow, to the width of four feet on each side, previously top-dressing the poor spots with any convenient manure. Once during the summer let the hands lay up the shoots, which will be numerous and strong, lengthwise of the hedge, using light forks, and *pressing the shoots down*. This must be done again in the fall or winter; when the ground on each side should be again plowed. After which no further tending will be requisite, other than to chop down weeds and briars twice during the summer, laying up the shoots snug by, as before, until the hedge has height and width of base sufficient. To this it must be limited by the use of light bill-hooks, with long handles, each winter.

We have had satisfactory assurance that stronger and more vigorous plants are produced from seed than from cuttings; and that the seeds vegetate rapidly under proper management. Seed is produced abundantly; it can be easily obtained

and transported to any part of the country; and it can be sowed in less time than cuttings can be properly planted; requiring, however, much more care in the after tending during the first year. Except in the facility of transportation to a distance, not much is gained by the use of seed instead of cuttings. The *hips* must be gathered during November, mixed with two or three times their bulk of sand or mellow earth, and kept in a cool, damp cellar or pit until the beginning of February, when they must be picked or sifted out, and rubbed to pieces, so as to separate the seeds from the husk. The ground having been prepared as for planting cuttings, half a dozen seeds may be dropped at the distance recommended and covered with half an inch of loose soil, the dropper then pressing the spot lightly with his foot. They will soon sprout and grow, and must be then kept completely clear of weeds—seedling roses will bear *no* shade of that kind. The surplus plants had better be pulled up, leaving only two or three in a place; one only being left, the next spring, to form the hedge.

Unless where their scarcity may render it an object, it is better not to transplant either from seeds or cuttings. Nothing is, otherwise, gained by it, and the labor is much greater than in planting cuttings. Layers make strong plants, but we do not use them, for the reason given above.

We will close by remarking that the cutting and seeds of the Cherokee Rose may be obtained in many parts of the country. In the vicinity of New Orleans, Natchez, Bayou Sara, Baton Rouge and many other points on the Mississippi; and of Charleston, S. C., Savannah, Geo., Mobile, Ala., etc., etc., they can be procured, we presume, without the slightest difficulty and at but trifling expense. To those *subscribers to the Review* who may not be able, otherwise, to procure them, and especially to residents of the prairies of Texas, we will with pleasure forward cuttings or seeds, being put to no expense in the matter.

T. A.

## II.—PRODUCT OF RUM ON SUGAR ESTATES.

We find the following in a late number of Simmonds' Colonial Magazine, published in London. It is richly worth the attention of our planters, and we would suggest a careful perusal. The day may come when the monopoly of the West Indies in this particular will be disturbed materially by our competition.

THE MANUFACTURE OF RUM, it may be premised, consists of two distinct chemical operations, viz:—1st, the preparation of the wash or liquor for distillation, and the distillation itself: with the first of these processes only at present we have to deal. The 2d, from the great improvement that has taken place in the construction of the stills, may, with propriety, be denominated more a mechanical than a chemical operation, and requires neither science nor ingenuity for its accomplishment.

In the first place, then, for the sake of illustration and brevity, let me explain in language adapted to the capacities of all, the terms in general use in our liquor lofts and distilleries.

A can of rum means - - - - - 5 gallons.

A pail of sweets - - - - - 5 ditto.

A gallon of sweets is a gallon of molasses, or 5 gallons of skimmings; in speaking of a gallon of rum it is understood proof 25.

The great object to be obtained in all still houses is to convert every gallon of sweets used in the process into a gallon of rum, pf. 25, or of the strength that will just sink a drop of olive oil, and let it be understood that I speak in general terms for our climate without alluding to the difference of apparent strength caused by a difference of temperature; that fact, although worth knowing, is more a matter for consideration to those who may be induced to try chemical experiments than for the every day operations of a distillery in these islands.

Two large receivers are necessary on an estate making 100 hogsheads of sugar, and converting the whole of the sweets derived from that sugar into rum, for the skimmings of one day ought not to be used, till an active fermentation has taken place in the receiver containing the first day's accumulation.

The first thing to be done before carrying the skimmings into the liquor vats is to

remove from their surface the grosser part, which may be advantageously used in feeding stock. I would then give each vat at least six pails per cent. of skimmings, and fill it up with cold water till within ten inches of the top. (I say *cold* water, for I do not approve of the sweet water from the coppers being used till perfectly cold, as it is sure to produce a tendency to the acetous fermentation.) The use of lees seems, of late years, to have gone completely out of fashion, and I think the quality of the rum is improved; but, formerly, the lees of the previous day's distillation formed a large proportion of the setting, and, I have no doubt, advantageously, if used with discretion, as it contains in most cases a quantity of unfermented sweets, and also the principle of active fermentation in itself, not too often used. Having given each vat its due proportion of skimmings and water, cover them carefully up with covers made of board in preference to rouseaus or cane tops, for the purpose of confining as much as possible the carbonic acid gas, it being also an active element in promoting fermentation. Next morning the vats must be all carefully skimmed, and, if a brisk fermentation has commenced, which will naturally be the case, they will be in a fit state to receive their first charge of 5 per cent. of molasses, after which the contents must be well stirred and mixed together from the bottom. On the third morning, having gone through the same process of skimming, finish charging by giving your intended proportion of sweets, which, in the first round of the liquor left, ought not to exceed 15 per cent. of the contents of the vat. Some distillers never exceed this proportion during the whole crop, but I could never ascertain the reason, nor was I ever induced to follow implicitly this limit. I was always guided by the return, and I could see no just cause, if I got a gallon of rum for a gallon of sweets used, to limit myself to such proportion; and, in consequence, in the middle of crop, I have used 18 or 19 per cent. of sweets with advantage as to the quantity and strength of the rum, besides a saving of fuel, time, and wear and tear of the still.

When it is desirable to convert the whole of the molasses into rum, I would recommend the following method of making a mixture of the same value as skimmings; put 10 pails of skimmings, 2 pails of molasses, 5 pails of lees perfectly cold, for every hundred gallons of the contents of the vessel in which the mixture is made, and fill up with water; allow it to ferment and use it as skimmings. This method, when the molasses is accumulating, will be found useful, and enable you to finish the rum crop as soon as the boiling is done, which is of great importance, as a proportion of skimmings in the liquor will insure better fermentation, and, consequently, a better return of rum than when the liquor is entirely made up from molasses as sweets, and mixed with lees and water. After the last charge of molasses, fill up all the vats with water, and skim and mix each daily for five or six days. After the fourth or fifth day's fermentation, the liquor in the vats, which had been in great commotion, will gradually subside till the eighth or ninth, when it will have entirely ceased to ferment, and be nearly the temperature of the surrounding air, and only a few bubbles be observed occasionally rising to the surface.

It is now fit for the still, and the sooner it is distilled the better. Draw out the plug in the bottom of the vat very quietly (the head of which ought to be immersed a little below the surface of the liquor, to prevent the accumulation of acidity round it,) disturbing as little as possible the wash, till nearly empty, and as soon as it has become thick and muddy, replace the plug, without allowing the sediment to enter the still, for that proportion contains no alcohol, and is a mere *caput mortuum*, and only tends to burn the bottom of the still, imparting to the spirits that disagreeable flavour, known by the appellation of "still-burnt" rum; then wash out the vats with a pail or two of hot lees, and they will be in a fit state to be proceeded with as before.

Great care must be taken to prevent the wash changing from the vinous to the acetous fermentation, for in this climate they follow one another in quick succession; in fact, I have known many instances where they were both going on at the same time; in that case no time ought to be lost in distilling the liquor, taking care not to use the lees in any subsequent setting; the vat ought then to be well washed out with boiling water and coated with thick temper-lime water; this was more necessary formerly, when the lees formed a proportion of the next operation; it is still very requisite, as the innumerable flies which accumulate round a bad vat will communicate the taint to the others. Should the liquor left, by any unaccountable means, get into bad condition, and the wash show a tendency

to run into the acetous fermentation, I would recommend the plentiful use of the milk of lime to whitewash the vats as soon as empty, and also if thought necessary the fumes of burning sulphur may be applied with great advantage.

The universal complaint, and the reason given for a failure in the returns from the liquor is, that the still-houses where the fermentation goes on, are *too cold*, and you will find every door and window shut to keep the loft hot; while the contrary, without exception, is the true cause. In such cases I have insisted upon a free admission of air, and the consequences have been universally what I expected—better returns.

Every one engaged in a distillery ought to know, that between 68 and 77 deg. of Fahrenheit's thermometer, is the temperature best calculated for promoting the vinous fermentation, and there are none of our liquor lofts or distilleries which do not exceed that extreme by many degrees; but it is the variation of temperature between the excessive noon-day heat, under a tiled roof, and the chill at night, that causes the mischief complained of, and not the cold; and our endeavors ought to be to assimilate the temperature as nearly as possible, by admitting the cool air during the day, and excluding it at night. I shall now add a table of the proofs of spirits, corresponding with the glass beads commonly in use, which will be found useful in estimating the number of gallons actually made, when reduced to the strength of proof spirits:—

Bead marked	17	indicates	41	per cent.	over-proof.
"	18	"	38	"	"
"	20	"	27	"	"
"	21	"	24.5	"	"
"	22	"	19.5	"	"
"	23	"	16	"	"
"	24	"	11.5	"	"
"	25	"	6.8	Tebago proof.	
"	26	"	0.5	ditto.	
"	27	"	5	under proof.	

### III.—EAST INDIA RICE.

The following will be of interest to our readers who are at all concerned in those staple products of the Indies which vie with those of our own country. We have shown in previous numbers of the Review, the progress which India has made in sugar and in cotton—the results in rice are equally important. We extract from the paper of Geo. W. Johnson, published in London, Colonial Magazine, No. 13, p. 15, and shall continue the subject in succeeding numbers of the Review.

RICE.—*Oryza sativa*.—Dr. Roxburgh considers that the wild rice, known as *Nivari* in Sanscrit, as *Newaree* in Telinga, and as *Arutz* in Arabic, is the parent from whence has sprung all the cultivated varieties, of which he says 40 or 50 are known, but Baboo Rhadakant Deb enumerates 120.—(Trans. Agri-Hort. Soc. ii. 235, &c.)

It must not be supposed that these are all permanent distinct varieties: many of them are doubtless the same variety which is mentioned in the list by other names; and others are similarly mentioned by several titles, though only casually altered in appearance or quality by being grown on different soils or, at different seasons. Whether grown in a cold or tropical latitude must effect a great change in the appearance of a variety gradually introduced from one climate to the other. This must occur to a greater extent with rice, perhaps, than with any other cultivated crop. Thus we see it growing in the plains of the most equatorial districts of Hindostan; and we find it in the lofty mountains of Joomla, towards the Himalaya, in Nepaul, where it sustains, without suffering, the circumstances of frost and snow. Dr. Wallich says: "It was sent to England about the year 1820; it vegetated there most vigorously, but was sown too late to per-

mit its ripening its produce.\* Still further north, and at a greater elevation, it yet continues fruitful. A kind of rice is grown on the terraces cut into the sides of the Himalaya mountains.† In the interior of these mountains, barley is not sown until May or June, and reaped in August or September; while on the exterior ranges, the harvest is gathering in, at the very time the seed is sowing in the interior, or at greater elevations. It is at this period that the rice is sown in places within the influence of the rainy season, which extends from about the middle of June to the end of September. In some places rice is irrigated, and in others it is not; but rain falls very frequently, and the air is always in a moist state from being charged with moisture from the heated valleys, and depositing it on the mountains, when it reaches an elevation where it becomes cooled below the point of saturation.

*Soil.*—Rice delights in a fertile soil; some varieties require the soil to be constantly flooded, and then it ought to be silicious; others require upland aluminous land, but in either case it must contain a more than usual quantity of decomposing animal as well as vegetable matter; and, whatever may be the mode of sowing or planting adopted, the soil cannot be reduced previously to too fine a tilth.

*Manures.*—The small quantity of dung applied by the native cultivators to this crop will be noticed incidentally when considering the modes of its insertion. No doubt can be justifiably entertained as to this niggardness being injurious, and that a much larger increase of grain would be the consequence of a more liberal application of such decomposing organic matter.

To the upland dry land crops I would recommend the application of common salt, in small quantities. One variety grown in the southern part of peninsular India, and noticed in the preceding list under its Malay name, *Cutandeu*, will not thrive in a soil where salt is not present. Four or five bushels per acre is probably a proportion that will be found highly beneficial.

*Sowing, &c.*—Throughout India the three following modes of sowing rice are practised:—1. The seed is sown dry in the fields, where the plants are to grow to maturity. At Seringapatam it is called the *Bora butta*, or *Puncjii*; in Malabar, *Podi-wetha*. 2. The seed is made to germinate before it is sown; this is known at Seringapatam as the *Mola butta*, in Malabar, as *Chetu-wetha*. 3. The seed is sown thickly in a seed-bed, and the plants when a foot high are transplanted into the fields, where they are to remain until harvest; at Seringapatam this is called *nati*, in Malabar, *nearra*.‡

The cultivation differing in each of these modes, it will be most intelligible to consider them separately.

It must also be observed, that there are two distinct crops of rice usually raised annually; one being sown just previously to the rains, and the other during the dry weather. In Mysore, the first is known as the *Hainu* crop, and the second as the *Caru* crop; by which names, for the sake of brevity, I shall distinguish them.

The *Caru* crops in Mysore, according to the time of sowing, are known by three names. If the seed is sown at the most favorable season, it is called *Cumba Caru*; but if, from want of power in laborers or cattle, some is too early and some too late, the first is called *Tula Caru*, and the second *Mysha Caru*. These variations cause a deficiency of from 30 to 50 per cent. in the crop. The produce of the *Hainu* and *Cumba Caru* crops is nearly the same.

*Dry Seed Sowing.*—For the *Hainu* crop this is regulated by the time of the setting in of the rains. In Mysore, three days previously to the first sowing, about the middle of February, the soil is softened by being watered. It is then plowed twice a month until the end of May. After the fourth plowing, manure, obtained either from the cow-house or city, is put on. After the fifth plowing, if rain does not fall, the field must be watered, and three days subsequently the seed is sown broad-cast, and covered by the sixth plowing. Any rain falling during the thirty days immediately succeeding the sowing, is allowed to run off through

\* Trans. Agri-Hort. Soc. of India, vol.iii. p. 82.

† This variety yields a larger proportion of pure farina and starch than the varieties grown in the plains, and altogether appears to be a more nourishing article of food, and, therefore, deserving of consideration. It is reaped in the beginning of November.

‡ Buchanan's Journey through Mysore, vol. i. p. 84.

an opening in the enclosing bank. If much rain falls at this time, the crop is considerably injured. If no rains have occurred during those thirty days, the field is kept constantly inundated until the crop is ripe; but if there have been occasional showers, the inundation is not commenced until the forty-fifth day.

[TO BE CONTINUED.]

#### IV.—TEXAS SUGAR.

THE annexed letter, from a gentleman in Texas, we insert in fairness. The whole truth should be known in every matter. If Judge Rost has been led into error, he will be happy to have it corrected. Will our friend, therefore, favor us with the proposed paper, for which a space in the Review is reserved.

GALVESTON, January 10, 1848.

J. D. B. DE BOW, Esq.,

In reading the last number of the Commercial Review of the South and West, wherein the manufacture, machinery and introduction of sugar are largely commented upon, I was inclined to believe, and find my opinion strongly supported by some of our oldest settlers on this island and in its neighborhood, that the references to Texas, which are on the 434th page, are greatly erroneous and, as I may say, totally incorrect.

I would have sent you an article in answer to some of the remarks about Texas, by this opportunity, but, wishing to know whether an article, differing so widely with the facts set forth by Judge P. A. Rost, would find a place in your paper, I deferred doing so, until being advised by you.

The individual named, and upon whose information the article has undoubtedly been written, appears to be unknown to every old settler, and I have found it yet impossible, though I have tried hard, to find out a person who may know such an individual; but all my exertions have been in vain.

Those persons who have tried the cultivation of sugar in this neighborhood, have, up to now, found no reason to complain of the soil, etc.

#### V.—PRODUCTION OF SUGAR IN SOUTH CAROLINA.

ROBERTVILLE, Beaufort District, S. C., 15th December, 1847.

J. D. B. DEBOW, Esq.:

THROUGHOUT St. Peter's parish and the upper part of St. Luke's and Prince William's, almost every planter cultivates a patch of from one-fourth to one or two acres of the cane, but comparatively few are prepared to manufacture it. In the parts of the district mentioned, there is scarcely a log cabin to be found, even on our poorest soil, where there is not attached to it a small patch, well manured, on which they very successfully cultivate a sufficiency of cane to furnish their families bountifully with syrup, and many of them with their years' supply of sugar. Such of them as are prepared for manufacturing, grind and boil for their neighbors, retaining one-third for toll. The yield of sugar to the acre, I am inclined to believe has not been less, upon an average, than 1000 to 1200 lbs. of excellent quality, besides a considerable quantity of syrup. I have heard of six barrels made to the acre, say 1500 to 1800 lbs. It is ascertained that stable manure produces the best sugar both in quantity and quality. In one instance, I have been informed, that the land cultivated had been *too highly manured*, by cow-penning thereon, to produce sugar: the cane grew very luxuriantly and made excellent syrup; but from some cause, perhaps a want of skill in boiling, it could not be reduced to sugar. The very general success, however, has been

such that it appears to be a universal determination to cultivate and manufacture the cane more largely in future. It is manifest that our *poor* lands, *without* manure, will not produce sugar; but when manured, will make three or four times as much in weight of sugar as they could of cotton, besides the syrup. A want of skill in manufacturing heretofore, has been a principal cause of so little cane being planted. But the *small* planters find it to their interest and convenience to so far turn their attention to its cultivation, as to make their own supplies in future. The more *opulent*, who have been depending on their overseers and their *long* staple, it is apprehended, will not very readily turn their attention to it. The one absorbing interest of making cotton and rice, has too generally superseded that attention (which would be beneficial to our planters generally) that should be bestowed on what they think *small matters*. The *small* planters and farmers are, generally speaking, the most independent and prosperous, because more personally attentive and enterprising. There can be no doubt that our climate is admirably adapted to the production of sugar, and, with proper attention to manuring, it would be more money-making than the overplanting of cotton. The machinery for manufacturing the cane is very simple. The whole cost of mill, boiler, furnace and sugar-house, to many of our *small* planters, probably does not exceed from \$50 to \$100 at most; and the fixtures generally, embraced in this calculation, are so simple as to require very little mechanical skill; perhaps the only cost of *money*, very generally, is the purchase of the boilers. No doubt, however, there might, and would be a great improvement in machinery, when the cultivation of the cane becomes more extensive. And that there will be an increased attention to this business, I have no doubt, especially if the present depression in the price of cotton continues.

Respectfully, yours,

ROBERT G. NORTON.

#### VI.—MANUFACTURES FOR THE SOUTH—RHODE ISLAND AND SOUTH CAROLINA.

*Manufacturing Industry, &c.*—One great cause of the unproductiveness of our capital and labor is the want of diversion of them. In every country there is a kind of labor which experience proves to be the best and most productive of that country. In one agriculture should predominate; in another manufactures, in a third commerce; but in no one on the face of the globe has an exclusive attention to either of these branches been found the most profitable. It is the judicious combination of them all that makes a nation great, and prosperous, and happy. This is an old political doctrine; its antiquity, however, is no disparagement of its truth. For its illustration we shall go no further than the history of our own country. And fortunately for our purpose the last census of the Government furnishes data upon which there can be no dispute.

If we divide the population of Rhode Island (138,830) and that of South Carolina (549,398) into their respective annual incomes, viz: into \$13,001,223 for Rhode Island, and into \$27,173,536 for South Carolina, it will be perceived that Rhode Island divides, as the yearly income of each of its inhabitants, \$100, while South Carolina divides only \$45. If you take out the black population in both States, and make the division only among the whites, Rhode Island will divide \$119, while South Carolina will divide \$101. These are startling facts. Why are they so? It will perhaps be said, it is either because the people of Rhode Island are more industrious than our people, or are engaged in more profitable labor; or from both causes combined.

The first of these we are unwilling to grant. Naturally we believe there are no people more willing to work than ours, when only taught to see a profitable result to their labor. The difference in the profits of the two States must be attributed, therefore, to some other cause. The labor of Rhode Island is diversified, ours is not. Let us see. There are engaged in—

RHODE ISLAND,			SOUTH CAROLINA.		
Agriculture,	- - -	1 in 6	Agriculture,	- - -	1 in 3
Commerce,	- - -	1 in 87	Commerce,	- - -	1 in 301
Manufactures,	- - -	1 in 5	Manufactures,	- - -	1 in 57

Divide the population of the two States into families of five each; there will be 27,766 families in Rhode Island and 118,879 in South Carolina. Give to each family, and to the horses, cattle, hogs, and sheep attached to each, the amount of grain, potatoes, and hay usually consumed by them, and it will appear that South Carolina will be deficient in a self supply as much as a million and a half bushels, while Rhode Island will have a surplus of very nearly that amount. This arises from the fact that South Carolina has more horses and cattle to support than Rhode Island. Thus they are in—

RHODE ISLAND.					SOUTH CAROLINA.				
1-2 a horse to a family of five,					1 1-2 horse to a family of five,				
1	cow	do.	do.	do.	4	neat cattle	do.	do.	
4	sheep	do.	do.	do.	1	sheep	do.	do.	
1	hog	do.	do.	do.	7 1-2	hogs	do.	do.	
6 1-2 of all kinds.					14 of all kinds.				

Suppose them to be equal, and that both States have enough of wheat, rye, oats, barley, potatoes and hay to support their population and cattle, the comparative incomes of the two States would stand thus:

RHODE ISLAND.			SOUTH CAROLINA.		
Manufactures,	-	\$8,640,526	Manufactures,	-	\$2,248,915
Commerce,	-	1,294,957	Commerce,	-	2,632,421
Mines,	-	162,410	Mines,	-	187,608
Forests,	-	44,610	Forests,	-	549,626
Fisheries,	-	659,312	Fisheries,	-	1,275
Rice,	-	.....	Rice,	-	1,514,772
Cotton,	-	.....	Cotton,	-	4,628,270
\$10,801,914			\$11,762,986		

From this estimate each inhabitant in Rhode Island, after feeding himself, will have over \$99 for clothing and other expenses, while each one in South Carolina will have a fraction under \$20.

The above table also shows another fact of much importance. The manufactures of Rhode Island are more valuable than the cotton and rice of Carolina taken together. In other words, the labor employed in the one is more productive than in the other two.

It is a question, then, which comes directly home to us, "Is South Carolina less capable than Rhode Island of excelling in the same profitable labors?"

We have already combatted that class of complainers who are eternally decrying the profits of agricultural labor; there is another class who elevate it too much—even to the exclusion of all other pursuits. Nothing is easier than to be so deceived. Such persons view the agricultural calling with a poetical eye and see in it nothing but pastoral beauty and happiness. Were this the occasion, no task would be more pleasant than to indulge in drawing a picture of the virtue, and excellence, and riches of a people thus engaged. As a rhetorical exercise it might afford entertainment; but the true economist, criticising the work, would pronounce it only a fancy picture, alike untrue to nature and to fact.

Besides this, the introduction of different manufactures amongst us would have an effect not less important to our agriculture—we mean the great inland trade it would create. In every prosperous country the inland or indirect trade is far greater than its foreign or direct trade. In England or New York, for instance, it is fifteen times greater. Consider then a new trade created for Carolina ten times greater than at present; consider for a moment the influence upon agriculture; how much more certainty it would afford the merchant in the investment of his capital than in foreign risks; what a numerous class of workmen it would employ; the misery it would remove by giving business to the idle, and the content and happiness it would afford the complaining. Is not such a consummation devoutly to be wished for?—[*South Carolinian*.]

## VII.—VALUE OF THE COTTON MANUFACTURE.

In previous numbers of the Review we have furnished interesting particulars of the progress made by Domestic Manufactures, to which, in this connection, the reader's attention is directed. What has been achieved in Great Britain will be the subject of our present observations, in which we shall be aided by a synopsis lately published in the National Intelligencer.

There was spun of cotton yarn in England and Scotland, in 1846, - - - - - lbs. 495,033,100

Which, calling a bale 400 lbs., equals 1,237,583 bales of cotton, and at 10 cents per lb. amounts to - - - - - \$49,310,100 00

Say first cost of cotton in the United States *on board ship* 7 1-4 cts.  
Freight to England, 5-8 penny - - - - - 1 1-4 cts.  
Waste in manufacture - - - - - 1 1-2 cts.

Making, per pound, - - - - - 10 cents.  
The total export of cotton from the United States for the year ending 30th June, 1846, was - - - - - 9,388,533 lbs. Sea Island.  
584,169,522 lbs. other kinds.

Making - - - - - 593,558,055 pounds, which was valued on ship board at - - - - - \$42,767,341 00 or, say less than 7 1-4 cents per pound.

There was exported from Great Britain to other countries, in 1846, in cotton manufactures and twist, [twist being nothing else but cotton yarn, or thread ready spun for the loom,] the weight of - - - - - lbs. 354,291,742

Or at 400 lbs. per bale, equal to 885,729 bales; and, at 10 cents per pound, the value of the cotton before the manufacture, including waste, as above put down, the cost of the cotton used for these exports was - - - - - \$35,429,174 20

The declared value of the foregoing exports, as given us by the custom-house returns of Great Britain, is the enormous sum of - - - - - \$112,684,516 80 From which, deducting the cost of the cotton, as above stated - - - - - \$35,429,174 20

And cost of various articles consumed in the dyeing, dressing, finishing, &c., of the cloth, which, with fuel, &c., cannot be - - - - - 8,000,000 00 43,429,174 20

There was left to the labor and capital of Great Britain a profit, or increased value, on the manufacture of these 885,729 bales of cotton of - - - - - \$69,255,342 60 or say in round numbers, \$69,000,000.

Of what did this export of cotton manufactures consist? The prepared returns say, of—

	Pounds weight.	Value in pounds sterl.
Calicoes, plain, or what we call domestics, bleached and unbleached. - - - - -	148,263,548	8,702,430
Cotton yarn, or what is called twist - - - - -	157,130,035	8,183,772
Making - - - - -	305,393,603	16,886,202
Calicoes, printed or dyed - - - - -	40,539,653	4,672,074
	345,933,256	21,558,276

The residue consists of cambrics, muslins, dimities, damasks, diapers, gingham, and checks,

laces, leno muslins, nankeens, quiltings, ticks,  
velveteens, counterpanes, hosiery, handker-  
chiefs, tapes, bobbins, &c., - - - - -

8,258,493 1,927,665

Making the total of - - - - - 354,291,749 23,475,941  
And at \$1.80 the pound sterling - - - - - \$112,684,516 80

In looking over this enumeration of exports we arrive at the following very striking analysis:

The portion of plain calicoes, which are nothing else but our "domestics," sheetings, printings, drills, &c., bleached and unbleached, and of twist, is - - - - -

Pounds And the va-  
weight. lue of.  
305,393,603 £16,886,202

Being equal to *six-sevenths* of the whole weight, and more than *two-thirds* of the whole value of the exports.

It will be observed on the above facts—

1. That a hundred items of profit to Britain on cotton are not included, viz: the amounts expended in various ways in its passage from this country to the manufacturing towns, through all intermediate hands.

2. That in the coarse fabricks, which constitute so large a part of British manufactures, the United States should be the formidable competitor, if not the monopolist.

3. That nothing is said of the profit realized by England on the cotton goods consumed at home, etc. In 1846, 141,000,000 lbs. of yarn were retained in the country, the profits of the manufacture of which, supposing the ratio above preserved, would be \$27,500,000; increasing the gross profits to \$96,000,000, or almost double the value of the whole export of cotton from the United States.

In the above there should be much to encourage us in this country, and more especially in the South, where we have the staple ready at hand, and every facility to convert it into the desired fabricks.

The following exhibits the comparative position of manufacturing countries:

#### SPINDLES EMPLOYED UPON COTTON.

	<i>Spindles.</i>
England and Wales - - - - -	15,554,619
Scotland - - - - -	1,729,878
Ireland - - - - -	215,503

17,500,000

	<i>Spindles.</i>
States comprised in general Custom League	815,000
Austria and Italy - - - - -	1,500,000
France - - - - -	3,500,000
Belgium - - - - -	420,000
Switzerland - - - - -	650,000
Russia - - - - -	700,000

Total - - - - - 7,585,000

	<i>Spindles.</i>
United States - - - - -	2,500,000 to 3,000,000
Number total - - - - -	27,585,000

England contains 634-1000 part of the spindles in operation; the remainder of Europe 272-1000 parts, the United States 91-1000 parts.

#### VIII.—NUTRITIOUS AND MEDICINAL PROPERTIES OF SUGAR.

A small quantity of sugar will sustain life, and enable the animal frame to undergo corporeal and (as I can add from personal experience) mental fatigue better than any other substance. Often have I travelled with the Arab over the burning desert, or with the wild Afric through his romantic country, and, when wearied with fatigue and a noontide sun, we have set ourselves down beneath an umbrageous canopy, and have shared with our companion his traveling proven-

der—a few small balls of sugar mixed with spices, and hardened into a paste with flour. Invariably have I found two or three of these balls and a draught of water the best positive restorative, and even a stimulus to renewed exertion. During crop time in the West Indies, the negroes, although then hard worked, become fat, healthy and cheerful. In Cochin-China the body guard of the king are allowed a sum of money daily with which they must buy sugar canes, and eat a certain quantity thereof, in order to preserve their good looks and *ehor-point*; there are about five hundred of these household troops, and their handsome appearance does honor to their food and to their royal master. Indeed, in Cochin-China rice and sugar is the ordinary breakfast of people of all ages and stations; and they not only preserve all their fruits in sugar, but even the greater part of their leguminous vegetables, gourds, cucumbers, radishes, artichokes, the grain of the lotus, and the thick fleshy leaves of the aloes. I have eaten in India, after a six months' voyage, mutton killed in Leadenhall market, preserved in a cask of sugar, and as fresh as the day it was placed in the shambles. In the curing of meat, a portion of sugar is often mixed with the salt and saltpetre. The Kandians of Ceylon preserve their venison in earthen pots of honey, and after being thus kept for two or three years, its flavor would delight Epicurus himself. In tropical climates the fresh juice of the cane is the most efficient remedy for various diseases, while its healing virtues are felt when applied to ulcers and sores. Sir John Pringle says the plague was never known to visit any country where sugar composes a material part of the diet of the inhabitants. Drs. Rush, Cullen and other eminent physicians are of the opinion that the frequency of malignant fevers of all kinds is lessened by the use of sugar; in disorders of the breast it forms an excellent demulcent, as also in weakness and acrid defluxions in other parts of the body. Dr. Franklin found great relief from the sickening pain of the stone by drinking half a pint of syrup of coarse brown sugar before bedtime, which he declared gave as much, if not more relief, than a dose of opium. That dreadful malady, once so prevalent on shipboard—scurvy—has been completely and instantaneously stopped, by putting the afflicted on a sugar diet. The diseases arising from worms, to which children are so subject, are prevented by the use of sugar, the love of which seems implanted by nature in them. As to the unfounded assertion of its injuring the teeth, let those who believe it visit the sugar plantations and look at the negroes and their children, whose teeth are daily employed in the mastication of sugar, and they will be convinced of the absurdity of the statement.—*Martin's History of the British Colonies.*

#### IX.—PROFITS OF SLAVERY IN LOUISIANA AND VIRGINIA.

THE Richmond Republican has some remarks, by Mr. Bruce, a planter, of Virginia, upon the above subject. They are worthy of attention, though made by far, we think, too favorable to Louisiana. If the product of the negro in the last State be large, it should be observed that his support is greatly more expensive. His value is higher and longevity and general health less. He does not increase and multiply in the same proportion. But let the remarks go as embodying some important truths.

The hire of a negro man in Louisiana, for a year, is cheap at \$200. Does any man doubt but that the hire of the same negro man is dear in Virginia at \$50. Let him who doubts try the experiment, and he will soon cease to doubt. The produce of Louisiana, the average product for five years, from 1840 to 1845 inclusive was—

117,000 hhds. sugar, at \$60 per hhd.	-	-	-	-	-	\$7,020,000
5,850,000 gallons molasses, at 20 cts. per gallon,	-	-	-	-	-	1,170,000
350,000 bales cotton, at \$30 per bale,	-	-	-	-	-	10,500,000
Making a sum total of	-	-	-	-	-	\$18,690,000

At present the sugar crop is greatly larger and the cotton smaller than they are here set down, though the proceeds of the crops, in money is about the same. The annual expenditure for machinery, engines, kettles, mules, horses and oxen.

is estimated by the Chamber of Commerce at \$870,000; but, place it at a million and then Louisiana draws an annual income from her slave labor of \$17,690,000. Supposing the slave population of Louisiana to be 200,000 during the five years from 1840 to 1845 inclusive, as the census in 1840 gave to her 168,452, and that statement makes the production of each slave in the State, man, woman and child amount to the sum of \$88 45.

In Virginia we have, or had in 1840, according to the census of that year, 418,987 slaves. The produce of their labor, as near as I can arrive at it, from such information as falls within my reach may be set down as follows:

Tobacco—44,865 hhds., at \$70 per hhd., is	\$3,140,550
Corn—150,000 bushels, consumed by 12,000 slaves engaged in manufactures,	90,000
Corn—foreign and domestic export 2,000,000 bsh., at 50 cts. per bsh.	1,000,000
Wheat and flour—foreign and domestic exports,	3,557,805
Cotton exported abroad and coastwise,	453,408
12,000 negroes engaged in mining and manufacturing at \$140 each,	1,680,000

Proceeds of slave labor in Virginia, - - - - - \$9,921,763

This calculation makes the average product of each slave in Virginia a little over \$22. Thus we see that the profits of slave labor in Louisiana is more than four times greater than its profits in Virginia.

#### X.—RESOURCES OF GEORGIA.—MANUFACTURES, &C.

MR. NISBIT, whose able article on Georgia in the Southern Review elicited so much applause—has lately made a report as chairman of the Committee on Manufactures, in that State, from which we extract:

Georgia presents the greatest possible advantage as a manufacturing State. She has a large amount of unemployed capital and labor. She boasts a climate favorable for every kind of enterprise and exertion. And then she occupies a geographical position, which gives her ready access to the markets of the world, with her manufactured products.

But a few years have elapsed since the introduction of manufacturing into Georgia. Those few years have witnessed the initiative policy, its rapid advance, and its triumphant success. We have in successful operation several iron establishments, with large capitals, and giving employment to some hundreds of operatives. These establishments are furnishing ironware of various kinds, cheap in price, respectable in quantity, and unexcelled in quality. They are also preparing to supply iron for machinery, agricultural implements, railroads, and all the uses of life. In the department of Cotton manufacturing, your committee have collected a few statistics, which they do not present as accurate, but approximating thereto. We know of thirty-two cotton factories in our State, in operation, or in progress of construction. There is employed in the buildings and working of these thirty-two factories, two millions of dollars. The number hands engaged therein, is near three thousand, and of persons directly receiving their support from the same, six thousand. The consumption of provisions and agricultural products (other than cotton) by these factories, is fully equal to three hundred thousand dollars per annum, at present prices. Their consumption of cotton, per annum, reaches 18,000 to 20,000 bags, and the value of manufactured goods, turned out by them, last year, fell nothing short of one and a half million of dollars. One-third of these manufactured goods were sold out of the State, mostly in the northern markets, and partially in the Valley of the Mississippi—that illimitable field of consumption which lays open to the enterprise of our manufacturers.

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Her citizens have been awakened to the importance of the last, and the statistics of the State at the present time show the following:

- Cotton Factories.*—1. The De Kalb cotton factory, near Camden.  
 2. The Bivingsville cotton factory, near Spartanburg Court-House, now the property of G. & E. C. Leitner.  
 3. A new establishment now being erected by Dr. Bivings, on a large scale.  
 4. The Saluda factory, near Columbia, which has been undergoing repairs during the summer, but now again in operation.  
 5. The Vacluse factory, near Hamburg, under the management of Gen. Jas. Jones.  
 6. The Graniteville factory, near Aiken, lately established and under the management of that intelligent and patriotic citizen, Wm. Gregg, Esq. His name alone is a guaranty of the success of the establishment.  
 7. The Fulton factory, near Stateburg, under the management of Col. Dyson, an enterprising and meritorious gentleman.  
 8. The Mount Dearborn factory, on the Catawba, lately put in operation, under the management of its enterprising proprietor, D. McCulloch, Esq.  
 9. The Marlborough yarn factory, owned by Messrs. Townsend & McQueen, and now leased to an enterprising and practical manufacturer from the North. In this factory, we understand, none but white operatives are employed; but we have not been informed of its success, since it has fallen into the hands of its present lessee.  
 10. There is also a small factory at Society Hill, owned by Colonel Williams, from which he supplies his own plantation, and those of the surrounding neighborhood, with a very superior article of cotton bagging. He also ships yarn to a northern market.  
 11. There is, besides, an extensive establishment of this kind, now in progress of construction, near Charleston, from which we have reason to expect the best results; and several minor establishments in the back country, where water power, equal to any in the world, abounds.

*Iron Works.*—1. The Cherokee Iron Works, on Broad River, in Spartanburg district, very extensive, under the management of Maj. Thos. T. Twiss.

2. The South Carolina Iron Works, on Paceolet, in Spartanburg district.

3. The King's Mountain Iron Works, on Broad River, in York District.

Besides some minor establishments, all of which appear to be getting on successfully.

#### XI.—MANUFACTURES IN GEORGIA AND TENNESSEE.

Georgia and Tennessee are destined to become the great manufacturing States of the South, if not of the Union, because they have not only greater resources in proportion to their population, but, being traversed in every direction by railroads and rivers, and having a double outlet, both to the Gulf and the Atlantic, they will possess unparalleled advantages in regard to both the foreign and domestic markets. If our people would display one half the energy and enterprise of the Yankees, in a quarter of a century from the present time we could surpass the whole of New England in wealth and population; indeed all that we now lack to develop that enterprise and energy is the establishment of manufactories, and the more general introduction of machinery.

Let us compare for a moment the agricultural wealth of the two States named with that of New England. Georgia and Tennessee have together a population of 1,694,000—the States of Maine, New Hampshire, Massachusetts, Vermont, Connecticut and Rhode Island have 2,422,000 souls. Now let us see the relative products of the two sections as developed by the census of 1840, and by more recent statistics:

	New England.	Geo. and Tenn.
Corn	11,943,000 bushels.	83,584,000 bushels.
Wheat	2,898,000 "	9,911,000 "
Potatoes	20,581,000 "	3,792,000 "
Rye	2,582,000 "	448,000 "
Oats	11,247,000 "	9,458,000 "
Buckwheat	1,097,000 "	
	50,348,000	107,194,000

In addition to this, Georgia and Tennessee produce annually about fifteen millions pounds of rice, probably three millions of sweet potatoes, none of which are raised in New England. They also have, according to the census of 1840, 1,906,851 neat cattle and 4,484,362 swine, whereas the six New England States have but 1,545,273 neat cattle and only 748,698 swine.

Thus showing that while we have a little over half the population of New England, we have more than double the capacity to feed them. Hence the fact that provisions are comparatively so much cheaper in these States than at the North, and hence the great advantage which we would have as competitors in manufacturing enterprise. In many parts of Georgia and Tennessee operatives can live for less than one-half of what it would cost them at Lowell, or in any of the great manufacturing cities of New England. Having this immense advantage in regard to provisions, and a corresponding advantage in procuring the raw material, why should our capitalists hesitate to invest their means in manufactures?

## PROGRESS OF THE AMERICAN UNION.

INCREASE IN POPULATION OF THE WESTERN TERRITORIES AND STATES—  
EXTENT OF THE WESTERN VALLEYS—RATIO OF INCREASE OF POPULATION IN THE WEST AND IN THE UNION—EXTENT OF AMERICAN TERRITORIES COMPARED WITH OTHER QUARTERS OF THE GLOBE—  
FUTURE PROGRESS OF AMERICA.

The following interesting particulars from the pen of WM. DARBY, Esq., formerly of Louisiana, were elicited by a communication to him directed, from the Hon. JOHN C. CALHOUN. They have been sometime on our table for publication, and we give them with a full conviction of their importance and value.

The basin of the Mississippi is the southern section of the immense central basin on the continent of North America, spreading from the Gulf of Mexico to Hudson's bay. In general terms, the Mississippi basin extends in latitude from 29 to 50 degrees north, and in longitude from the extreme northeastern sources of the Allegheny branch of Ohio, near Cowdersport, Penn., 1 degree west of Washington to the northwestern sources of Marias river, branch of Missouri, 34 degrees west of Washington, or extending over twenty-one degrees of latitude, and thirty-three of longitude. Forty, north, is so near as to admit being assumed as the mean latitude. This curve, on North America, as it is over its whole range round the earth, the most important of all lines of latitude, extends over the basin of the Mississippi about 1,500 miles.

### *Population of the Central Valley, 1810.*

Kentucky	- - - - -	406,511	39,000 square miles.
Tennessee	- - - - -	261,727	40,000 "
Ohio	- - - - -	230,760	40,000 "
Indiana	- - - - -	24,520	36,000 "
Illinois	- - - - -	12,292	59,000 "
Missouri	- - - - -	20,845	60,000 "
Michigan	- - - - -	4,762	54,000 "
Arkansas	- - - - -	.....	55,000 "
Mississippi	- - - - -	40,350	45,000 "
Louisiana	- - - - -	76,556	48,000 "
Alabama	- - - - -	20,845	51,000 "
Amount	- - - - -	1,099,845	527,000 "

The elements in this table yield for 1810 a distributive population, a small fraction over two to the square mile. On the much more densely populated sections, as Tennessee, Kentucky, and Ohio, with a combined area of 118,000 square

miles, the aggregate population, expressed in round numbers, 917,000, the distributive population did not reach *eight* to the square mile. In this estimate, I have not included the population of western Virginia, Pennsylvania, and part of western New York, which sections, though in the west, or on the central basin, were, politically, and indeed socially more particularly, attached to the Atlantic border.

But the ratio of increase of population on the sections included was 227, or more than double, in the decennial period—1800–1810.

By the census returns of 1820, the entire surface designated in the latter table was represented to possess a distributive population of about four to the square mile, or an aggregate of 2,217,463, the population having again rather more than doubled in the decennial period—1810–1820.

In 1830, on the same surface as above, the census of that year reported an aggregate of *three millions six hundred and seventy-two thousand five hundred and sixty-nine*—the ratio of increase from 1820 to 1830 being 1·65; and though the interior population had so rapidly increased, still the distributive population did but rarely reach seven to the square mile.

The sixth census of 1840 was, if we may except that of 1790, the most important yet taken, as half a century was embraced by the extremes, and an aggregate of 5,302,918 inhabitants were found on the same surface as above, and reported by the last enumeration, and yet, even then, the distributive population, but a little exceeded 10 to the square mile. Ratio of increase from 1830 to 1840, 1·44. And thus stood a surface in 1840, really only beginning to be peopled, and exceeding that combined of France and the whole Spanish peninsula.

When we thus behold a wilderness, in so few years, changed from a howling waste to the prosperous aspect presented in 1840, we are inspired with most pleasing wonder. Yet when we reflect, our convictions, though involuntary, must be deep and enduring, that on the space designated, and on the far more extensive regions beyond, that population has only taken its steps of infancy. In 1840, as may be easily shown by comparison, the mean density, on what could then be regarded as populated, did not reach the one-tenth of that of several sections of the Atlantic border. It ought also to be called to mind that the combined interior under review, does not include all of “the western country” embraced by the census of 1840. Every principle applicable to the sections named, in the last table above, apply also to the western parts of New York, Pennsylvania, and Virginia, which we find recorded in the census tables of 1840.

The population of western New York, 1840,	-	-	-	-	1,683,068
“ “ Pennsylvania, 1840,	-	-	-	-	815,289
“ “ Virginia, 1840,	-	-	-	-	147,514
Amount	-	-	-	-	2,645,871
Add	-	-	-	-	5,302,918
Total, 1840, in “western country”	-	-	-	-	7,948,789

Those parts of New York, Pennsylvania, and Virginia, embraced in the latter tabular view, taken together, embrace a length, from northeast to southwest, of 700 miles, and a mean breadth of at least 100 miles; area 70,000 square miles, which added to 526,000, yields an entire superficies of 596,000, or, for all general purposes, we adopt 600,000, and in like manner for the population, assume 8,000,000, and we then have only about *fourteen* to the square mile.

Without attempting to compare “the Great West,” or rather the comparatively small part of it now directly under review, to the most densely populated sections of the Atlantic border, let us see what would be the aggregate of the former, if peopled equally in proportion to Pennsylvania in 1840. In that year, with an area of 47,000 square miles, Pennsylvania contained 1,724,033—or say, 37 to the square mile—a like proportion on 600,000 square miles, would give an aggregate of 22,200,000.

Then, what comparative part of the great central basin is 600,000 square miles? Let us see. According to data already given in this paper, the proportion of surface is as 6 to 17, and a similar proportion of population to the whole central basin, yields sixty-three millions very nearly. If we suppose, as we are fully justified to do, and as I shall show presently, the latter amount realized, what will then be the density of population on the central basin? Why, about

37, or not one-third of the number, which would be a thin population on such a surface.

In a preceding table of this paper, 1,099,158 is given as the aggregate of central population in 1810. Above, you read an aggregate of 8,000,000 for 1840, or very nearly *seven-fold* in thirty years. This, to those who have not investigated the data are startling developments; but they are deduced from the most unquestionable elements. For all useful purposes, the progress of population in the United States, general and special, can be calculated to any given year of the current century, if no longer, with all the security of accomplishment of astronomical phenomena.

By one of the wisest national provisions ever made by any people, a decennial enumeration was provided for, and under its provisions, six times has the census been taken, and produced results superior to any anticipated.

*Tabular View.*

Year.	Amount.	Ratio of increase.
1790	3,929,827	1.354
1800	5,305,925	
1810	7,239,814	1.364
1820	9,638,131	1.331
1830	12,866,920	1.333
1840	17,063,353	1.326

mean 1.342.

Here we see how nearly the decennial increments give regular increase of one and a third. Such coincidence must arise from an inherent law of progress. Such laws, on which any series is found to produce regular results, must give full confidence of a near approach to certainty, from the principle that like cause and steady cause, can only yield like and steady effects.

If we take 3,929,827, and multiply by 3, on the supposition that the population of the United States advances by an increment of *three per cent.*, and operating on the principles of compound interest, the subjoined are results compared with the actual census:

Actual census amount.	Amount at 3 per cent.
1800	5,305,925
1810	7,239,814
1820	9,638,131
1830	12,866,920
1840	17,063,353

Difference in a period of 50 years - - - - 154,353

Here we have an authenticated example of human progress, to which history affords no parallel.

In furtherance of the solution of the problem before us, I insert here the aggregates of the annual population of the whole United States, as deduced from an increase of 3 per cent. per annum from 1840 to 1850, inclusive:

1840	- - - - -	17,217,706
1841	- - - - -	17,734,237
1842	- - - - -	18,266,263
1843	- - - - -	18,814,249
1844	- - - - -	19,378,685
1845	- - - - -	19,959,053
1846	- - - - -	20,557,823
1847	- - - - -	21,174,557
1848	- - - - -	21,900,792
1849	- - - - -	22,464,084
1850	- - - - -	23,138,004

We may, from every concurrent data, assume *twenty-one million*, as the existing aggregate of the population of the United States, at the present time, or year. On this the question rises, what are the proportions, on opposite sides of the Appalachian mountains? The entire population by the censuses respectively of 1790 and 1810, the ratio for 50 years, comes out 4.342—or the population

doubles in a little less than *twenty-five* years. We have already found that western population has augmented *seven-fold*, in the thirty years, 1810, 1840, inclusive. To obvious causes this increase may be attributed, but there is one not generally noticed—emigration receives more than due credit. The west gains by natural increase, and loses nothing, worthy of account, by *re-emigration*.

Amongst the natural features which give peculiarity of character to the Mississippi basin, far the most remarkable, and as regards social and political considerations, the most important, is the near approach of the northern fountains of the two great valleys of Ohio and Mississippi proper. It is impracticable to render this fact evident by means of verbal description; but it may be observed, as already stated, that in a distance of 1,600 statute miles, from the sources of the Mississippi to those of Allegheny river, only a comparative narrow strip of land intervenes between the border of the Canadian lakes and the fountains which commence the confluent of the Ohio and Mississippi rivers. In northwestern Pennsylvania, the strip does not exceed 5 or 6 to 12 or 15 miles, but the ground is high and abrupt, though not precipitous on the side of Lake Erie.

Opposite the southwestern extreme of Michigan in the northwestern angle of Indiana, and northeastern of Illinois, the intervening strip is again still more confined in breadth, and is low and flat. Westward of Lake Michigan, and south of Lake Superior, the dividing line of the waters recede from the lakes; but approach again to within a few miles westward of Lake Superior.

Extent of land eastward of Lake Michigan, and thence to the sources of Allegheny river, and intervening between the basin of Mississippi and Canadian sea—square miles. 33,000

Extent of land intervening between the Lakes Michigan and Superior, and basin of Mississippi—square miles 90,000

Amount of square miles 123,000

This place, in its broadest parts either, east or west of Lake Michigan, is not 200 miles wide, and, in its narrowest part, southward of Lake Michigan, not two miles wide. The average breadth about 75 miles.

So near, indeed, and so blended are the two basins of Mississippi and Canada, and the intervening space included in the domain of the United States, that it would not do great violence to natural laws, and be consonant to political connection, to unite them as parts of one whole; the more, as in fact they are both parts of the great central basin of the continent of North America.

Similar remarks may again be made on the opposite extreme, towards the Gulf of Mexico, as Texas on the west, and the consecutive valleys of Pascagoula, Mobile and Apalachicola on the east, form parts of the same great inclined plane with the basin of the Mississippi.

Texas, taken in its widest extent, is bounded by the Rio Grande on the south-west and west, by the Gulf of Mexico southeast, and on all other sides by the former contiguous territories of the United States.

From the mouth of the Rio Grande, nearly on north latitude 26 degrees, in a direction of nearly north-northwest, the length does not much exceed or fall short of 1,000 miles. From the point where the one-hundredth degree of longitude west of London, leaves Red river to the Rio Grande, in a direction of southwest by west, the width is about 300 miles and the mid distance of such a line would fall nearly on longitude 25 degrees west of Washington city, and on latitude 32 1-2 degrees north. Such a line would represent what may be called the Narrows of Texas, and if drawn would divide the country into two sections, and which might be relatively called Southeastern and Northwestern Texas.

*Southeastern Texas* has a form rudely approaching that of a trapezium base along the general course of the Rio Grande, 600 miles, and perpendicular of 500 miles, falling from the northeastern angle of Red river. The curves in the outline, however, yield an area of about 180,000 square miles. The slope gentle, and in a southeastern direction obliquely towards the Delta of the Mississippi, as shown by the general course of its rivers.

*Northwestern, or Higher Texas*, approaches a square of 350 miles each side, or area about 120,000 square miles. The features of higher Texas are peculiar.

The western part, formed by the deep though narrow vale of the Rio Grande, declines southwardly; whilst, with a chain of minor mountains or hills intervening, the much larger section slopes eastwardly, and gives source to the Brazos, Red river of the Mississippi basin, and to the higher branches of Arkansas. Regarding Rio Grande as a fixed boundary, the preceding elements produce an aggregate area to all Texas of 300,000 square miles, equal to 192,000,000 of acres, and about equalling the whole Atlantic border of the United States.

Eastward of the lower part of the Mississippi basin, and southward of the valley of Ohio, the united valleys of Pascagoula, Mobile, Apalachicola, and some minor streams, drain a surface of about 65,000 square miles, having, as is the case with lower Texas, an inclined slope towards the Great Delta, and may, for all statistical purposes, be included in the same system.

*Summary table of that part of the Central Region of North America now included in the dominions of the United States, and spreading from the Appalachian on the east to the Chippewayan or Rocky mountains on the west, and named, from its principal river the Basin of the Mississippi.*

<i>Natural Sections.</i>	<i>Square Miles.</i>	<i>Aggregate Acres.</i>
Missouri, - - -	500,000	<div style="display: flex; align-items: center;"> <div style="margin-right: 10px;"> <span style="font-size: 3em;">}</span> </div> <div> 1,698,000  or, in round sum, 1,700,000 </div> </div>
Mississippi proper, - - -	180,000	
Ohio, - - -	200,000	
Lower Mississippi, - - -	330,000	
Canadian lake border, - - -	123,000	
Texas, - - -	300,000	
Mobile region, - - -	65,000	1,088,000,000

To give more distinct ideas of the real and comparative extent of the central section of the United States, the following data are introduced:

A due north and south line from the mouth of the Rio Grande, at very near 21 degrees west of Washington, to north latitude 49, measures within a very small fraction of sixteen hundred miles; a distance differing little from that between the straits of Gibraltar and the Orkney Islands, or that from Cape Metapan, in the Morea, to the Gulf of Finland.

The Balize, at the outlet of the main pass of the Mississippi, is at north latitude 20 degrees 4 minutes, and west longitude west 12 degrees 8 minutes. The extreme western fountains of Marais river, or those of the Mississippi basin, are at longitude 35 degrees west of Washington, and at latitude 49 degrees north. A line drawn over the intermediate distance between those points would measure by actual calculation, 1,747 statute miles, would traverse Lake Pontchartrain nearly centrally, cross the Mississippi river a few miles above Natchez, the main Arkansas near Fort Smith, and reach its middle distance between Grand Saline and Solomon's Fork, branches of Kansas river; and thence over Platte river and the numerous higher confluent of Missouri river to its termination in the gorges of the Rocky mountains; course north 15 degrees 14 minutes west. A similar line, in a like angle, with the meridian would reach from south-western Spain to Warsaw.

We might adduce other comparative views from distances, but deem those given as adequate to answer the present purposes and proceed to comparisons of surface.

In Darby's Geographical Dictionary, under the article Earth, pages 202 and 3, it is shown, that deducting deserts, more or less extensive over parts of all the continents, and frozen tracts, particularly towards the northern extremes of Asia and America, the arable surface admitting any considerable density of population, amounts to only about 31,000,000 of square miles. Reasons are there given, to show conclusively, that this reduction of the habitable land, if in error, the allowance is in excess. In the present case, we adopt it and proceed, making thirty-one millions unit.

*Table Comparative of that part of the great central region of North America included in the domain of the United States. Its extent, compared with the whole land area*

*of the earth, that of the continent of which it forms a part, and that of other great sections of the land area of the earth, rejecting minute fractions.*

LAND OF THE EARTH.		PRORPTION.	AREA.
The earth, entire surface - - - - -		116th nearly	197,000,000
Land, Polar region, &c. - - - - -		40th	67,009,000
Do. reduced for arable - - - - -		18th	31,000,000
Asia - - - - -		9th	15,000,000
Africa - - - - -		6th	11,800,000
New Holland, Australia - - - - -		4th	4,172,000
Europe - - - - -		1-2	3,200,000
North America and Greenland - - - - -		1-3	8,770,000
South America - - - - -		1-4	6,621,000
Europe, Russian - - - - -		1 and 1-2	1,400,000
Europe non-Russian - - - - -		1 very nearly	1,800,000
United States territory, including Texas, Oregon, &c. - - - - -		7-10th very n'rly	2,500,000
Russian Empire, Europe and Asia, -		4-10th	4,000,000
Chinese Empire - - - - -		1-3	5,000,000
Brazilian Empire - - - - -		1-2	3,000,000
	U. States part of the central basin, 1,700,000 sq. m., and in extent equals		

In national statistics, the amount of population is only one of the correlative elements which demand attention. The spread and location of the people, as well as their number, demand the most attentive inquiry. When, in 1790, the census of the people of the United States was first regularly and nationally taken, where did the population exist? In answer, it may be observed that, with not an exception of one-tenth, the main spine of the Appalachian mountains bounded the population. It is safe, therefore, to assume the Atlantic slope, with an area of 300,000 square miles, and a distributive population of about thirteen persons to the square mile, as the space which held, with the exception of about one-tenth, the whole people of the Union.

Before 1790, scattering settlements had been made on the extreme northeastern fountains of Ohio, and some few and far scattered around the borders of other parts of the Mississippi basin. Tribes of fierce savages stood opposed, but the destiny of things could not be stayed, and during the decennial period, from 1790 to 1800, these savages were crushed, and settlements greatly extended, and population increased, expanding, we may say, into the central basin. It ought to be here premised that for reasons too obvious to need explanation, Louisiana and Florida, with Michigan, ought to come into our general view, as they were subsequently incorporated into the Union.

By the census of 1800 the subjoined sections had a population of—

Kentucky, - - - - -	220,455
Tennessee, - - - - -	105,602
Ohio, - - - - -	45,365
Indiana, - - - - -	4,375
Mississippi, - - - - -	8,880
To which add, by supposition, for Western New York, Western Penn- sylvania, Western Virginia, Michigan, Florida, and Louisiana, -	100,000
Amount in 1800, - - - - -	482,777

Admitting this summary to be correct, and that the aggregate ten years before was 300,000, the ratio of increase would be 1.60 for the decennial increase. This amount for the increase and aggregate population of the central basin of the United States, at the beginning of this century, may excite suspicion of excess rather than the contrary. The surface on which this amount resides, or at least the far greater part, only 300,000 square miles, yet had not a distributive population of fourteen persons on ten square miles. At the same epoch, New Orleans, with perhaps 5,000 inhabitants, was the only place in the basin deserving the name of a city.

## MONTHLY COMMERCIAL SUMMARY.

FINANCES OF NEW YORK AND BOSTON; CONDITION OF BANKS; TRADE OF NEW YORK CANALS FROM 1842—1848; PITTSBURGH CANALS; SPECIE MOVEMENTS AND CIRCULATION; IMPORTS NEW YORK; BANK OF ENGLAND; COTTON MILLS AND HANDS IN MANCHESTER; ENGLISH COTTON TRADE; IMPORTS INTO GREAT BRITAIN 1847; RAILWAY MOVEMENTS IN GREAT BRITAIN; PRICES OF COTTON IN LIVERPOOL 1846—47; EXPORTS PRODUCE FROM UNITED STATES; RATES OF FREIGHT IN NEW YORK; VESSELS AND TONNAGE OF THE UNITED STATES, ETC.

*February.*—The aspect of financial affairs, which changed so materially in the month of November, has not, up to this time, assumed a more promising appearance. Money in New York and Boston, as well as in Philadelphia and other cities, has been very scarce and high in price. The pressure has continued severe in New York, but more so in Boston where the want of money appears to be more directly felt than elsewhere, notwithstanding the large and profitable sales of manufactures which New England has made during the past year to the rest of the Union. With the lapse of time, however, and the rigid course of the Banks in relation to Discounts, the liabilities of the mercantile community are becoming much curtailed, as they mature in amounts larger than the new creations of notes, and therefore the demand for money is less, producing apparent ease while the supply is no greater. The continued export of specie has been a sufficient cause for the exercise of the utmost caution on the part of the institutions, after the very exposed condition in which they had incautiously placed themselves, through the neglect of the "signs" from abroad, between August and November. It has resulted from the last years' large exportations, that the country is richer than the cities, that is to say, instead of balances being due New York and the centers of trade, as usual, the Atlantic cities have been more than usual in debt to the country, as thus the New York Banks at the return in November showed bank balances due as follows:

	Due New York Country Banks.	Due Banks in other states.	Total balance due in N. Y. Banks.
Nov. 1846, - - - -	1,504,886	3,649,829	5,154,715
" 1847, - - - -	2,948,560	6,308,255	9,256,815
Increase, - - - -	\$1,443,674	\$2,658,426	\$4,102,100

This was a considerable increase of balances, and of the \$6,308,255 due by the New York Banks to institutions in other states, a considerable portion was due the South, thus the Merchants' Bank of this city owed the Bank of Mobile, alone, more than \$1,000,000. Hence the abundance of bills on the North. The amount due the interior Banks in New York, was double what it was in the previous year, and was the natural result of the enormous deliveries on the canals.

The value of produce delivered on the Hudson, at tide water, for a series of years has been as follows:

	1842.	1843.	1844.	1845.	1846.	1847.
Products of the Forest, . . . .	3,741,059	5,956,474	7,716,032	7,750,596	8,589,291	8,798,373
Animals, . . . . .	4,827,615	6,357,344	7,888,922	9,002,196	10,633,820	12,565,214
Vegetable Food, . . . . .	10,340,427	11,337,625	12,634,616	17,579,581	22,286,905	41,350,436
Other Agriculture, . . . . .	494,847	616,666	596,327	630,404	742,093	799,109
Manufactures, . . . . .	1,949,541	2,561,159	3,489,670	6,432,259	4,865,799	6,024,518
Merchandise, . . . . .	55,432	56,224	86,153	88,497	276,872	517,594
Other Articles, . . . . .	1,342,092	1,667,922	2,328,526	3,559,658	3,770,476	3,127,980
Total, . . . . .	\$22,751,013	28,453,408	34,640,446	45,452,391	51,105,256	73,092,414

This table gives the immense flow of the western trade through the Erie canal into the Hudson river, and it will be seen that the value has increased nearly 200 per cent since 1842. The principal increase has been in the article of breadstuffs, the value of which has nearly doubled in the past year. The "product of animals," mostly cheese, pork and wool, has also greatly increased in amount. The increase in tonnage of all products coming down, has been 381,964 tons, or 30 per cent; while that of merchandise going up, has been 74,472 tons, or 25 per cent. The descending tonnage represents as alone produce coming down, and the ascending tonnage, merchandise going up. This comparative trade has been as follows:

	1842.	1843.	1844.	1845.	1846.	1847.
Descending Tons, . . .	666,626	836,861	1,019,094	1,208,943	1,362,319	1,744,283
Ascending " . . .	123,294	143,365	176,737	195,000	213,795	287,267
Total, . . .	789,920	980,456	1,195,831	1,403,943	1,576,114	2,032,550

The down tonnage increase much faster than the up tonnage, showing the increasing independence of the western country for goods and of credits in their favor with the Atlantic Banks. The commerce of the Pennsylvania line of canals presents similar results. The imports and exports of the leading articles to and from Pittsburgh by the line of canals has been as follows:

IMPORTS AT PITTSBURGH.			EXPORTS.		
	1846.	1847.		1846.	1847.
Dry Goods, lbs. . .	12,651,818	23,201,074	Tobacco, lbs., . .	24,696,742	14,777,069
Hardware, " . .	10,522,463	14,501,693	Hemp, " . . .	1,287,886	3,311,628
China-ware, " . .	4,957,454	5,046,218	Lead, " . . .	325,985	188,078
Coffee, " . . .	10,920,933	9,927,605	Bacon, " . . .	21,661,236	12,713,427
Groceries, " . . .	6,933,856	7,833,925	Cotton, " . . .	1,000,971	1,056,138
Hats & Shoes, " . .	2,049,540	2,690,821	Flour, " . . .	156,402	297,940
Total, 6 articles, 48,036,084		63,201,396	6 articles, 48,972,820		32,046,340

There is a great decline here in Bacon and Tobacco, and the results were similar in relation to those two articles at New Orleans where the year ends two months earlier. The value of produce delivered at New Orleans from the Mississippi, as compared with that delivered at the tide water on the Hudson is as follows:

	1844.	1845.	1846.	1847.
New Orleans, . . . . .	60,094,716	57,190,122	77,193,464	90,033,256
Hudson, . . . . .	34,640,446	45,452,301	51,105,256	73,092,414
Total both places, . . . .	74,735,162	102,651,423	128,298,720	163,124,670

It has been the case during the last four or five months, that while the receipts of produce have swelled the credits of the country with the Atlantic cities, the state of the foreign markets in relation to bills has been such as to exhaust the commercial capital of the seaboard. Thus while the country draws upon the city for the proceeds of produce, the city is not only unable, through the discredit of bills, to realize from abroad, but must remit specie in payment of imports. By this double process, therefore, money becomes scarce on the seaboard, to say nothing of the movements of the government. For the month of December the export of specie from the port of New York, was \$1,788,867, and from Boston, \$662,986, making together \$2,451,853 from the two ports. The steamer cleared from New York Jan. 1, carried in addition \$398,000, and the Siddons packet ship

\$100,000, and other vessels took \$274,000, making near \$800,000. This continued drain, growing out of causes to which we have alluded in former numbers, has forced upon the Banks the utmost circumspection. They held in November \$9,000,000 specie, and the last estimates do not now make the sum on hand more than \$4,500,000. The pressure is producing its own cure to some extent by checking importations; many orders that had been sent abroad for goods have been superseded, or countermanded. The business of the port of New York for the month of December, shows some decline in the value of goods received, as compared with last year, as follows:

## IMPORTS PORT OF NEW YORK MONTH OF DECEMBER.

	Specie.	Free Goods.	Dutiable.	Total.	Duties.	Average rate of duty.
1845, . . . .	\$78,469	558,185	3,439,991	4,076,645	1,359,806	39½
1846, . . . .	61,346	537,496	4,279,813	4,878,655	1,136,327	26½
1847, . . . .	39,712	111,251	3,316,845	3,467,808	856,576	25½

The stringency of the market here is powerfully aided by returning ease in England, in promoting exports hence, and preventing imports.

The latest accounts from England show a greatly improved condition of the money market, and the position of the Bank, the leading features of which have been as follows:

## BANK OF ENGLAND.

	Loans.	Deposites.		Net circulation.	Notes on hand.	Bullion.	Rate of interest.
		private.	public.				
Oct. 23, .	19,467,123	8,588,909	4,766,394	20,318,175	1,547,270	8,312,691	9a9
" 30, .	20,424,897	8,911,442	4,696,032	20,842,412	1,303,103	8,439,674	8a9
Nov. 6, .	19,919,915	8,804,395	4,991,313	20,396,448	2,030,385	8,730,351	8a9
" 27, .	18,531,810	8,238,554	7,799,572	18,963,575	4,986,590	10,532,943	6a7
Dec. 11, .	17,630,931	8,437,376	8,329,759	18,320,505	6,448,780	11,425,176	5½a6

The returns of October 23 marked the turning point of the present panic. Up to that time the failures had been immense and the difficulty of getting money greater than perhaps was ever before experienced. The note of the government to the directors, permitting them to infringe the law of 1844, was then issued; and that allowance itself, although not acted upon, seemed to relieve public feeling, and bullion began to flow in under the influence of paralysed trade and non-payment of bills drawn on England. The numerous failures, suspension of railroads, and stoppage of manufacturing as well as commercial enterprise, reduced the demand for money; and the above returns show the singular fact that, December 11 the loans of the Bank were near £3,000,000 less than October 30, the circulation outstanding £2,520,000, and the bullion in the bank £3,000,000, making together £5,520,000 less money in the hands of the public, and yet the price was reduced 2 1-2a3 per cent. These facts show to how great an extent the demand for money must have subsided. The railways had, to a very great extent, suspended operations until money should become cheaper, and, as a consequence, the iron masters had reduced the wages of the workmen, preparatory to reducing the price and "the make." In the manufacturing districts a slight reaction had taken place, as seen in the following figures of the operations in Manchester:

## COTTON MILLS AND HANDS IN MANCHESTER.

	Mills.				Hands.			
	full time.	short time.	stopped.	total.	full time.	short time.	out of employ.	total.
September 24, . . . .	130	23	22	175, . . . .	25,006	8,339	7,664	41,009
October 5, . . . .	125	26	24	175, . . . .	24,317	7,956	8,736	41,009
" 12, . . . .	112	33	30	175, . . . .	23,200	8,701	9,108	41,009
" 19, . . . .	97	48	30	175, . . . .	18,516	12,198	10,341	41,053
November 16, . . . .	90	60	23	173, . . . .	19,145	12,055	7,995	40,995

Since these returns some further resumption of work has taken place, but the activity has not reached that of the last of September, the consumption of cotton has in consequence been much less than last year, and the stock remaining on hand at the close of the year, much larger than it was supposed would have been the case under the short supply. The imports, exports, consumption and stock of cotton from January 1, 1847, to December 17, distinguishing American descriptions, were as follows:

	1846.				1847.			
	Import.	Export.	Cons'pt'n.	Stock.	Import.	Export.	Cons'pt'n.	Stock.
United States.....	900,856	90,846	1,173,310	259,340	813,559	60,863	782,400	223,920
Others.....	191,517	1,126	303,700	148,010	246,215	.....	222,930	135,410
Total,.....	1,092,373	91,972	1,477,010	407,350	1,059,774	60,863	1,005,330	359,330
Decrease,					32,609	31,109	413,790	37,220

The high prices which the diminished crop of the United States received, brought increased supplies from other quarters, and latterly, when the railroad demand for money pressed so severely on manufacturing industry, the consumption fell. This appears to have been brought about by the manner in which railroad shares were distributed in the community. The calls averaged £1,000,000, or \$5,000,000 *weekly*, and the mania had involved all classes of persons, particularly shop keepers. Hence, when money became scarce, and stockholders were compelled to pay up instalments under penalty of forfeit, they did so by *reducing their stock of goods*. They took money from their business to put into railroad shares, hoping for a reaction. Hence, all the stocks of manufactured goods in the shops are supposed to be far less than usual; and this circumstance has affected manufactures as much as the actual decrease in the consumption of goods. With the diminished demand from store keepers, a high price for the raw material and capital very scarce, it was not to be supposed that manufacturing would be continued to the usual extent. As soon, however, as prices of cotton fell, and money became more plenty, operations were renewed. To restore to shop keepers and general business the capital that has been abstracted for railroads, must be a work of time. More particularly that "the lines" will renew the "calls" at the earliest opportunity. The suspension of railway expenditure must have a great influence in checking the consumption of all descriptions of produce, bread included; inasmuch as to their operation was justly ascribed an annual consumption during the past year. As an indication of the extent of this process, we may take, from official sources, a table of the imports of leading articles as given officially for the nine months ending October 10, 1847.

## IMPORTS INTO GREAT BRITAIN, FROM JANUARY 10 TO OCTOBER 10.

	1845.	1846.	1847.
Live animals, number,	20,593	85,542	172,355
Bacon, cwt.,	4,540	1,513	72,995
Beef, "	1,841	363	2,579
Butter, "	189,056	177,165	243,140
Cheese, "	183,891	216,191	243,601
Hams, "	4,543	8,094	17,334
Pork, "	32,713	42,685	212,510
Rice, "	392,205	541,520	1,046,083
Tallow, "	501,758	430,221	557,991
Sugar, "	4,411,782	4,469,699	6,509,181
Total, nine articles, cwt.,	5,722,329	5,887,651	8,905,444

	1845.	1846.	1847.
Cocoa, lbs., - - - - -	3,016,301	1,938,665	9,764,333
Coffee, " - - - - -	32,166,932	35,099,814	35,769,744
Tea, " - - - - -	36,825,461	41,432,479	44,912,880
Tobacco, " - - - - -	10,717,001	19,505,668	11,023,085
Total, four articles, lbs., -	82,725,695	97,976,626	101,470,045
Spirits, gallons, - - - - -	5,449,456	5,209,648	6,648,769

These are nearly all articles of luxury, when applied to a famine-stricken country, and the increase down to the moment of most severe financial distress was marked and large. The grain and flour imported was as follow:

Indian corn, qrs., - - - - -	47,913	451,193	3,240,588
Other grain. - - - - -	1,121,533	1,898,146	4,204,914
Total grain, - - - - -	1,169,446	2,349,339	7,445,502
Indian meal, cwt., - - - - -	102,932	1,335,464	
Flour, " - - - - -	394,908	2,528,397	6,562,901
Total flour, cwt., - - - - -	394,908	2,631,329	7,898,365

The Indian corn and meal was mostly destined for Ireland, but a large portion of the other grain was imported, not so much from the absolutely deficient yield, but through enhanced consumption by reason of railroad expenditure. In the period embraced in this table, viz: from January to October, the amount of railway calls was as follows:

## RAILWAY MOVEMENT IN GREAT BRITAIN.

	British.	Foreign.	Total.
Calls payable in January, - - -	£1,457,968	£1,662,000	£6,119,968
" February, - - -	1,454,881	80,000	1,534,881
" March, - - -	3,083,697	502,000	3,585,697
" April, - - -	4,313,439	40,000	4,353,439
" May, - - -	2,965,344	514,000	3,479,344
" June, - - -	2,454,756	1,550,000	4,004,756
" July, - - -	3,891,545	1,032,000	4,926,545
" August, - - -	2,222,839	62,000	2,284,839
" September, - - -	3,325,651	800,000	4,125,874
" October, - - -	3,365,651	92,360	3,458,011
Total, - - -	£31,538,994	£6,334,360	£37,873,351

From the above it will be seen that £6,334,360 belong to foreign railways, and are, therefore, only in part payable by English shareholders, leaving £31,538,994 as the actual amount called for by English railways.

This was rather more than £1,000,000 per week. The £6,334,360 of foreign calls were not to any considerable extent payable in England, and none expended there. For November the calls fell to £2,000,000, and for December still less. This process of railway expenditure, it must always be born in mind, is converting floating into fixed capital—taking capital from shops and manufactures and buying foreign produce for the consumption of 500,000 persons employed in railways. It is true that those persons would eat and drink if not working upon railways, but their labor would then produce an exchangable value to pay for what of foreign produce they consume. The high wages which the competition compelled the lines to pay, enabled the laborers to indulge in tea and coffee, and better food than ordinary. These were imported and paid for with money instead of goods. The effect of this was, that while more tea and coffee, and other edible produce was imported, there was less of the raw materials of manufacture. Those of the latter were as follows:

	1845.	1846.	1847.
Indigo, cwt., - - - - -	79,325	60,321	58,385
Flax, " - - - - -	1,048,390	744,861	732,034
Cotton, " - - - - -	5,495,799	5,786,089	3,423,031
<b>Total cwt., - - - - -</b>	<b>6,623,514</b>	<b>6,191,271</b>	<b>4,213,451</b>
Silk, raw, lb., - - - - -	2,865,605	3,429,260	3,051,015
" thrown, " - - - - -	311,413	293,402	200,715
Wool, " - - - - -	57,308,477	51,058,209	43,348,386
<b>Total, " - - - - -</b>	<b>60,485,495</b>	<b>51,780,871</b>	<b>46,600,116</b>

So great has been the diminution in the import of those articles, the manufacture of which into goods for export, forms the basis of British industry. That revulsion and distress should grow out of a perseverance in such a course, is by no means to be regarded as singular. It is to be considered now that the element of this distress, viz: the railroad expenditure has ceased to a very great extent, and, therefore, that the operation of trade will change. There will be far less consumption of food, and, therefore, less import of it, while the reversion of labor to manufacturing employments will revive the demand for raw materials for the production of goods for export, in payment of produce. It is by this process, if at all, that the financial affairs in England will become restored to a sound footing. A great element in a revived prosperity is, doubtless, the low price of raw materials. Thus, New Orleans and Mobile cotton, on December 17, in Liverpool was, as compared with the same date of 1846, as follows:

	Ord.	Mid.	Fair.	Good Fair.	Good.	Choice.
1846, . . . . .	6½@6¾	7 @7½	7½@7¾	7¾@8	8¼@8½	9@10
1847, . . . . .	3½@4¼	4½@4¾	4½@5	5¼@5½	5½@6¼	6½@7
Reduction, . . . . .	2¾@2½	2½@2¾	2¾@2½	2½@2½	2½@2½	2½@3

This reduction of 33 1-3 per cent. in the raw material, at a time when stocks of goods are very low, enables spinners to buy the raw material at such advantage as to make the investment safe, and it was on this ground that the recent revival of activity in the manufacturing districts was based, rather than on an actually improved demand for goods. On the continent of Europe the railway expenditure continues unchecked. The calls for the French lines for January and February amounted to 100,000,000 francs; say \$20,000,000. Throughout Germany the activity was also great. These produce in a lesser degree, because operating on a larger population, an effect similar to the expenditures in Great Britain in an enhanced consumption of produce, thereby diminishing the supply that could be spared for British consumption.

Under all these circumstances, it would seem that for the present year the exports of United States produce to England would be less in magnitude and profit than was the case last year. In the New York market, the decline in cotton has been as follows:

	Ord.	Mid.	Fair.	Fully Fair.	Good Fair.
January, . . . . .	9½a10	10½a10¾	11½a11½	11½a11½	11½a12
February, . . . . .	12½a12¾	13 a13¼	13¾a14	14 a14¼	14½a15
March, . . . . .	9½a 9¾	10½a10¾	11½a12	12½a12¾	12½a13
April, . . . . .	10½a11	11½a11¾	12½a13	13½a13¾	13½a14
May, . . . . .	11½a11¾	12 a12¼	13½a13¾	14 a14¼	14½a14½
June, . . . . .	11 a11½	11½a11¾	13 a13¼	13½a13¾	13½a14
July, . . . . .	10½a10¾	11 a11¼	12½a13	13½a13¾	14 a14¼
August, . . . . .	10½a10¾	11½a11¾	13 a13	13½a13¾	13½a14
September, . . . . .	11½a11¾	12 a12¼	13½a13¾	14 a14¼	14½a14½
October, . . . . .	10½a10¾	11½a11¾	12½a13	13 a13½	13½a13¾
November, . . . . .	8½a 8¾	8½a 8¾	9½a 9¾	9½a10	10½a10¾
December, . . . . .	6½a 6¾	6½a 6¾	8½a 8¾	8½a 8¾	8½a 9
January 1, 1848, . . . . .	6½a 6¾	7½a 7¾	8½a 9	9 a 9¼	9½a10

The fall in prices was rapid from September, by reason of the difficulty in negotiating bills and the growing money pressure in this market. The posture of the market now holds out the prospect that as money becomes easy in the manufacturing districts of England, and the pressure continues here, cotton will go more freely forward at gradually improving rates. Last year the exporters of produce experienced great difficulty in the scarcity of freights, and speculation ran very high. At this port they were as follows:

## RATES OF FREIGHT IN NEW YORK.

	Cotton, lb.	Flour, lb.	Tobacco, hhd.	Heavy Goods, ton.	Grain, bush.
		s. d. s. d.	s. s.	s. s.	s. d. s. d.
January 6, 1847,	3-8a7-16	5 a5.3	59a60	54a55	1.6a1.7
February 6, 1847,	7-16a1-2	6.6a7.0	74a75	75a80	1.11a2.1
" 27, 1848,	3-4a7-8	8.9a9.0	87a90	90a95	2.3a2.6
January 10, 1848,	0a1-8	1.9a2.0	25a27	20a25	0.6a0 7

These figures produce an erroneous fluctuation, which was produced as well by the lessened export as the increased supply of shipping. The large freights of last year stimulated inordinate activity in ship building, and the official reports give the following number and tonnage:

## VESSELS AND TONNAGE BUILT ANNUALLY IN THE UNITED STATES.

	Ships.	Brigs.	Schrs.	Sloops and Canal boats.	Steamers.	Total.	Total tons.
1843, . . .	58	31	138	172	79	482	63,617
1844, . . .	73	47	204	279	163	766	103,337
1845, . . .	124	87	322	342	163	1,038	146,018
1846, . . .	100	164	576	355	225	1,420	188,202
1847, . . .	181	168	686	392	198	1,508	243,732

This increase of tonnage was large, 55,530 tons, and mostly in sea-going ships; hence the supply of freights. The construction of vessels produced a demand in all the materials of which they are composed. The increase of 50,000 tons shipping would require an increased supply of 1,200 tons hemp. The exports of the United States for the year ending June, 1847, as compared with former years, were as follows:

## EXPORTS UNITED STATES.

	1844.	1845.	1846.	1847.
Products of the				
Sea, - - - - -	3,350,501	4,507,124	3,453,398	3,468,032
Forest, - - - - -	5,808,712	6,550,421	6,807,248	5,996,073
Agriculture, - - - - -	79,938,410	75,409,860	78,827,511	129,108,317
Manufactures, - - - - -	8,163,039	10,247,455	10,183,864	9,305,000
Unenumerated, - - - - -	1,600,090	1,269,338	1,379,566	1,108,984
Other articles, - - - - -	854,427	1,315,578	1,490,303	1,999,276
Total, - - - - -	99,715,179	99,299,776	102,141,893	150,637,464

This large exportation was, of course, added to the large freights carried by American vessels the means of casting the balance of trade largely in favor of the United States, and the imports and exports were as follows:

## EXPORTS.

## IMPORTS.

	Domestic Goods.	Foreign Goods.	Specie.	Total.	Goods.	Specie.	Total.
1846, . . .	101,718,042	7,865,206	3,481,417	113,488,576	117,914,065	3,777,732	121,691,797
1847, . . .	150,574,844	6,166,036	1,845,119	158,645,922	122,424,349	24,121,289	146,545,638
Increase, . . .	48,856,802	.....	.....	45,160,106	4,510,284	20,343,557	24,853,841
Decrease, . . .	.....	1,699,147	1,536,298	.....	.....	.....	.....

The import and export of specie leaves a balance of \$22,276,170 added to the money in the country. This has been kept in unusual activity through the opera-

tions of the government, which has received during the year from all quarters, \$48,667,826, and disbursed in the same time, \$48,226,516. Of this disbursement, an amount equal to one half has gone through the mint into general circulation. It is not probable that by any means so large an amount of specie will be again imported this year, while the wants of the government for army expenditures will be considerable. Last year the amount negotiated was \$22,000,000, of which \$18,000,000 was bid for in April, and the aggregate bids amounted to \$58,000,000. Of this, a large amount was bid for on speculation by persons who had not the money to invest. This speculative spirit was, however, engendered by the generally promising appearance of trade under the large influx of specie. This year, under more adverse circumstances, the government will require some \$20,000,000 before August, and perhaps a much larger sum, inasmuch as that the Treasury notes at the present price form the chief medium of payments into the Customhouse, and diminish the resources of the government to that extent. It is to be hoped, however, that from the returning ease in the London money markets confidence may be restored in the credit of English merchants so far as to make the bills drawn upon them against produce, available, a circumstance which would restore to the commerce of the Atlantic cities the capital which, under that discredit, has remained in abeyance. If the government can negotiate its drafts freely in Mexico for specie, it may prevent sending specie thither; but if those drafts are taken by English agents and presented in New York for payment, and the proceeds sent to England, the finances of the country are not relieved. On the other hand, if the exchanges are restored to their usual soundness, and the Mexican drafts invested in sterling bills, instead of gold, the effect will be to meet the Mexican expenditure with balances due from England for produce. Up to this moment, however, there is no return of confidence in British credit, and at our latest dates the distrust of all but first class paper was as great as it at any time had been, and the future does not promise permanency to the flattering prospects of recovering from financial disorder there. It may yet result that a suspension of the Bank and resort to inconvertible paper money be attempted before the struggle of the railroads for capital shall finally cease.

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## MISCELLANIES.

### I.—BERMUDA.

Most erroneous opinions exist in regard to the Bermudas. Many suppose them to be a small collection of low and almost barren rocks, from which sunken reefs push themselves for miles in all directions, requiring the most extraordinary caution to be used in approaching them; that the harbors are open roadsteads, the soil meagre and thin, and that the group was placed where it is, for no other purpose but to be a terror to mariners.

It is true, that before the erection of the light-house, a vessel was occasionally stranded on the northern reefs; but such disasters must now be of rare occurrence, and, in running for the islands, no more than ordinary care is required on the part of the navigator. So far from being cold and barren, there are few spots that can be made so productive, or so well reward the labor of the agriculturist. There are but few tropical productions unsuited to the soil and climate, and all of the grains and many of the fruits of the north can be cultivated with success. It is not unusual to see most of the tropical fruits, with tobacco, coffee, cotton, indigo, oats, Indian corn, vegetables, and a variety of rare medicinal plants, all flourishing in the same enclosure. The orange and grape thrive admirably; and

were the cedar cherished less, (for it is now allowed to lumber the most fertile portions of the country,) and proper attention bestowed upon fruit, Bermuda could be made one magnificent fruit garden.

The climate is changeable, but subject to no great extremes of heat and cold. In December, January, February, and a part of March, the winds prevail from the west and north, and often blow with great force, accompanied with violent storms of rain. There are many days in those months when the air is cold, damp, and disagreeable, but at no season is there any appearance of frost. In March the air becomes mild, with frequent showers and breezes from the south. In June it is sultry and oppressive; but the mercury rarely rises much above 86 degrees. Long droughts at this season are common, with an occasional deluge of rain. In September the weather again becomes mild and agreeable.

Snakes and venomous reptiles, that usually swarm in tropical countries, are unknown here. Occasionally a centipede or a harmless lizard is seen, but cockroaches, ants, and mosquitoes are sufficiently numerous. There are but few birds; beside the gull, only five that are common—the red bird, ground dove, black bird, blue bird, and a sparrow, named, from its peculiar note, "Chick of the Village." Occasionally a crow is seen on some remote island, and, after a hard wind, the eave and chimney swallow appear for a day or two. During the autumn storms, large number of plover stop here to rest themselves; but they are hunted with such tenacity, that they soon leave for regions where powder and lead are less plenty. A great variety and abundance of delicious fish are every day exhibited in the markets, and the turtle is common.

The soft, white stone peculiar to the country, which may be quarried from almost any place, is universally used for building. This stone, resembling hard mortar, seems to be easily cut with a common saw. A variety of limestone rock, very close and compact, and sometimes variegated, is also found, which is capable of a high polish. In the numerous caverns along the seaboard are found colored stalagmitic and stalagitic concretions, which are worked into various ornamental articles called hard-water.

There are numerous springs on the islands, but rain-water is generally used. Almost every dwelling has its stone walk. Often, in the country, the side of a hill is paved with stone slabs, plastered and whitewashed; and from the slides, resembling banks of snow, the water runs into tanks at the foot of the hill.

There are nearly 400 islands in the group, containing about 13,000 square acres. Few of them, however, are important in size, the larger number being mere rocks, covered with a thin soil, producing only stunted cedars. The island of St. George, about 4 miles in length, lies at the northeast end of the range. Fort Catharine, at the northeast point of this island, is in lat. 32 deg. 24 min. 47 sec., long. 64 deg. 37 min. 49 sec. On the south side of St. George is the town and harbor of that name. This harbor is of easy access, completely land-locked, and vessels of 15 feet draught can enter in safety. Its proximity to the sea, and being at the same time deep, capacious, and secure, renders it the usual place of resort for disabled vessels. For some time a miner has been engaged in removing several reefs at the entrance by submarine blasting, where the passage was not so deep and direct as desired; and an additional appropriation having lately been made for this work, the desired improvements will probably, before another winter, be fully completed. There are substantial stone wharves in this town, commodious warehouses, and upon five wharves are kept every convenience required for heaving out and repairing ships. St. George is a garrison town, and the island is very strongly occupied. The government works and fortifications are all of the first order, extensive, commodious, and substantially built. South of St. George is St. David's Island, being 3 miles in length, its eastern point forming the promineny called St. David's Head. Somerset, about 3, and Ireland Island, about 2 miles in length, lie at the west and northwest of the main land. Ireland forms the extreme northern point of the western coast, and is the naval depot for the station. An extensive breakwater has been constructed there; and for a considerable period the labor of a large convict establishment has been employed in strengthening that important station. Bermuda, or the main land, extends from east to west about 22 miles, nowhere exceeding three miles in width, and in general not more than one. Hamilton, the seat of government and principal port of entry, is situated at the center of Bermuda, on an inlet, which affords a safe and convenient harbor. This harbor is not so accessible, neither can vessels go in there with the same draught of water as into St. George's. Hamilton and St. George have each a population of about 1,400.

The appearance of the country is a continued succession of steep elevations from 50 to 200 feet in height, with small valleys at their bases, where the soil is deep and fertile. The hills are fertile and covered with low cedars. In the valleys they grow large, and some of the bottoms are almost darkened by those trees. The cedar is a favorite wood for ship building. It is fine grained, very heavy, and almost indestructible. For durability and sailing qualities, there are no vessels that excel those built in Bermuda. The roads are excellent; and the houses are so thickly scattered over the country, as to give the whole island the appearance of a continuous village—being built of stone, generally kept perfectly white, and so surrounded with shrubbery and flowers, that they have a neat and very inviting appearance. The scenery is beautiful; and the land is so narrow that a succession of delightful sea-views is presented to the traveller.

There are about 1,800 soldiers stationed on the islands. At Ireland there are three convict hulks, and one at St. George's. The convicts number from twelve to fifteen hundred, and are employed on the fortifications.

Bermuda is divided into nine parishes; and in 1843 the population was a little less than 10,000—about 445 to the square mile. There are 21 churches and chapels—*nearly one for every mile*; 1 semi-weekly and 2 weekly newspapers; about 20 public or free schools, and as many private ones. In 1841 there were 297 births, 57 marriages, and 161 deaths. The number of deaths from all causes is estimated at 1 4-5 per cent. annually. The imports in 1846 amounted to \$672,072 70; number of vessels that entered in 1846 was 194; and the number belonging to the colony in that year was 53—3,551 tons, 314 men. Most of the provisions issued to the troops are from England. The inhabitants obtain theirs from the United States. About 80 oxen and as many sheep are a supply for the troops and convicts for six weeks. These animals generally come from New York, and are kept in stalls till slaughtered.

*Staple productions in 1846.*

Arrow root	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	\$19,755	94
Cedar boats	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	523	20
Cedar timber	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1,005	60
Onions, 397,646 pounds	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7,859	68
Palmetto plait	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	157	41
Potatoes, 10,536 bushels	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8,856	96
Whale oil, 869 gallons	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	623	48
																					\$38,782 30

Bermuda is completely enclosed by reefs from the southwest round to the north and northeast. At the northeast, the reefs are about five miles from the land; at the north, about ten; at the northwest and west, about seven; and at the southwest, about six miles. North rock, in latitude 32 deg. 30 min. 12 sec. longitude 64 deg. 46 min. 42 sec., is situated at the outer edge of the reef, and is about 20 feet above high-water.

## II.—CONDITIONS OF SUCCESS IN BUSINESS.

MERCANTILE success, we all know, depends very much upon a sagacious calculation of the probabilities of the future. The young merchant looks to the future for that competence which is the object of his labors; and his hope is realized in proportion as he is skilful in anticipating the phases and wants of that future. The sagacious merchant infers, from certain appearances of the present, that such and such will be the condition and wants of the coming season, and he prepares himself to meet that condition and those wants, and prosperity is the reward of his foresight and care. He judges from information which he has carefully collected, and from appearances which he has watchfully noted, that a certain crop will be short, or a particular description of goods scarce; he estimates the demand and the prices which a short supply will occasion; he takes care, in good season, to obtain the control of as much of the article to be supplied as he can dispose of, and, this done, he can coolly count his gains, weeks or months before they are realized, with as much confidence as if they were already in his hands.

The two principal conditions of success in mercantile calculations appear to be, a sound and well informed judgement, and a regulated and reasonable desire of gain. The inordinate, grasping anxiety of wealth, which characterizes many men, is, in a large proportion of cases, a passion fatal to their success. It blinds the judgement, and misleads it into visionary schemes and ruinous speculations, and an ample experience shows that men of the coolest, most deliberate habits, when they have once yielded to the passion for wealth, are no longer capable of reasoning wisely. Of the other qualifications—namely, correct information, as a condition of mercantile success—it seems hardly necessary to speak. "Knowledge is power," says the great master of English philosophy. Nor less in mercantile life than elsewhere is this maxim true. The language of every merchant should be, "Give us light;" increase and multiply the means of information. What is capital, energy, enterprise, sagacity, without accurate knowledge, extensive information? An ignorant merchant may happen to succeed, even in this day, but every one must see that it is a most improbable peradventure.

There is no one subject in which the whole mercantile community have deeper interest than that of the vast modern increase of the facilities for diffusing and obtaining full and correct information on every thing pertaining to trade, so that all may enjoy its advantages; and no man need hope to compete successfully with his neighbor, who shuts himself out from a participation in these facilities. The time has come when it is no longer in the power of the few to monopolize; and every day tends more and more to equalize the condition and advantages of business men, and to throw wide open to all the door to wealth, respectability, influence and honor. Nor is there any necessity for the frequent failures in mercantile life which have distinguished the past. The young merchant who commences on the broad and sound moral basis of integrity and nice mercantile honor, and who conducts his business with intelligence and judgment, and without undue eagerness and haste to be rich, will generally meet with success, as he will certainly deserve it. It is true this is a day of ardent competition; but it is not less true, that it is a day when manly, honorable enterprise buckles on its armor under auspices the most cheering and hopes the most encouraging. *N. Y. Mercantile Times.*

### III.—MERCANTILE LIBRARY ASSOCIATIONS.

We have, on frequent occasions, referred to these important unions of those engaged in mercantile pursuits. Their influence upon the community has already been marked; and when they become universal, we shall expect a liberal and enlightened body of American merchants. Why should mercantile education have ever been neglected? Can learning be misplaced here, or is not its absence a burning reproach?

Within a short time, we have received, with gratification, reports of the Boston and Charleston Associations, which show increasing prosperity. To us, who are so solicitous for commercial education to be introduced into our colleges and universities, these indications cannot but be hailed with pleasure. We make the following extracts from the report of the Charleston Society:

**Officers—A. O. ANDREWS, President. P. J. BARBOT, Vice President.**

We are gratified to be enabled to announce an increase of one hundred and thirty members. Still no inconsiderable number of our commercial names remain unconnected with us. Shall this continue so? Is there an intelligent merchant in Charleston, who feels an interest in the promotion of her commercial importance, who recognises the value, nay the absolute necessity, of sending forth her young men, thoroughly furnished, to take their posts, and successfully to bear their parts in the honorable struggle which our city is waging, who will refuse or neglect to give to our Association his name, his countenance, and a small annual pecuniary contribution? We cannot believe so; and should not cease our exertions until every business man, who avows any sympathy with the commercial fortunes of Charleston, is registered upon our roll.

The Board recommend a Chair of Commerce to be connected with the Association, a proposition which, in a somewhat different form, we have long advocated, as will be noticed in the preceding numbers of this Review.

The State of Louisiana will have the credit of taking the lead in this movement and of originating the idea; for it is now understood we are to have a CHAMBER OF COMMERCE in the new University at New Orleans. There is not another, strictly, that we know of in the world, though the European mail of to-day informs us that the Government of the States forming the Zoll Verein, intend establishing a COMMERCIAL UNIVERSITY at which young men destined to become merchants, manufacturers or commercial lawyers may receive their complete education.

The following extract upon commercial character is worthy to be treasured:

The profession of the merchant calls for the exercise of no limited faculties,—no mean acquirements—no stinted and circumscribed mind; nay, his transactions not unfrequently demand a judgment, sound, discriminating, comprehensive, well-balanced, and severely disciplined—a sagacity keen and quick, and a compass of knowledge embracing the wants, habits, resources, products and institutions of civilization itself. Nor does his country fail to recognize, in the accomplished merchant, the possession of qualifications peculiarly fitting him for her highest service. We see his counsel eagerly sought in the cabinet of the statesman, and his name honorably enrolled among the ministers of Government. Our own Republic is full of honorable examples. If we turn our eyes to that great mother empire of modern commerce—Great Britain—what is the position of the man of commerce and his influence there? But a short time since and we beheld one of her merchants bearing the high embassy of his Sovereign to our shores, charged with the negotiation of a question of vast magnitude, great delicacy and perplexing intricacy. Successfully executing his mission, he has returned, and commerce claims for her distinguished son the enviable reward of having satisfactorily and peaceably adjusted what had, for more than a quarter of a century, baffled the skill and defied the wisdom of astute diplomatists, and well nigh rendered the peaceful relations of two great territories. While in the astounding overthrow of a system heretofore regarded as interwoven with the very texture of British policy, commerce is even now exulting in her rich trophies, and wreathes the name of Richard Cobden with a garland fragrant from the sweetened labors and added comforts of toiling millions. One of the districts of England, sharing most largely in her aristocratic influences, is at this moment represented in the imperial Parliament by an American merchant. And has Charleston no sympathy in these onward movements? At a time like this, when she is putting forth all her energies not to be outstripped in the race of honorable competition with her sister cities—when she is endeavoring to multiply and develop all her industrial and commercial resources—and to render herself a concentrating point, towards which trade and enterprise shall be attracted—shall she be indifferent to the tone—the character—and the training of the young men who must hereafter take their posts as her commercial representatives? The dictates of enlightened interest and lofty patriotism alike forbid it!

#### BOSTON MERCANTILE ASSOCIATION.

WARREN SAWYER, *President*; THOMAS H. LORD, *Vice President*; JOHN STETSON, *Corresponding Secretary*; JOHN H. ALLEN, *Recorder*; JAMES OTIS, *Treasurer*.

THE following donations have been made to the society, which evince the spirit of Boston. *One Thousand Dollars* each for the following: Hon. Abbott Lawrence, Amos Lawrence, Esq., Wm. Stingis, Esq., John Bryant, Esq., John Plushing, Esq., Wm. Appleton, Hon. Nathan Appleton, Samuel Appleton; John Welles \$500, F. C. Lowell \$200; for each of the following \$100: John A. Lowell, J. A. Edmunds, D. C. Bacon, Horace Gray.

#### MERCHANT'S MAGAZINE—COMMERCIAL REVIEW.

The following paragraph from the Report of the "Charleston Association," refers in flattering terms to FREEMAN HUNT, Esq., of the "*Merchant's Magazine*," and ourself. So far as we are concerned, we thank the Association with all our heart for its kindness. We have been connected with many of its members in the happiest hours of life—at school, at college, and in the social circle. We look back to those times with lingering regret, and the associations of home which come crowding upon us are many and powerful. God bless our old city and our old friends. They are still foremost in our heart and affections!

"In exercise of the power given them by the Constitution, the Board have unanimously elected, as honorary members, FREEMAN HUNT, Esq., and J. D. B. DEBOW, Esq. These gentlemen are entitled to wide and honorable distinction. The former in originating the "*Merchant's Magazine*," the first successful attempt of its kind in the United States, sustained and conducted as it has been by marked ability; and the latter, a native of our own city, in the laudable spirit

which prompted the establishment of the "*Commercial Review of the South and West*," and the masterly pen which he has wielded in elucidation of the commercial interests of the South, have richly earned our most grateful acknowledgments; and we trust that this testimonial from our infant institution, the only one we can give them, may not prove unwelcome."

### THE PUBLISHING BUSINESS.

*The Louisiana Magistrate and Parish Officers Guide*, 1848.—We are indebted to B. M. Norman for a copy of this very *appropos* work, by Judge Olcott and Mr. Spofford. It contains copious forms and instructions for Justices of the Peace, Administrators, Executors, Clerks, Sheriff's, Constables, Coroners and business men generally. There is much useful information contained in it, though the subjects treated upon are not elaborated enough for the practical Attorney; believing, as we do, that a little law is a dangerous thing; yet the forms for subordinate officers of justice, &c., supply a vacuum long felt by all interested in the legal profession; and considering the very distracted state of our statutes as they now exist, the volume will be found of great utility. The work was published by the authors, and is in the hands of our neighbor, B. M. Norman, for sale. We trust it will be extensively circulated throughout the State, and amply remunerate the enterprising gentlemen connected with it. We are always delighted to see a Louisiana Book.

*Professor R. S. McCulloh's Report to Congress on Sugar*.—We have received the second part of this able work through the kindness of our friend, Senator Johnson. It is a volume of 300 pages of valuable matter. We design a review of it at an early day, and shall put our readers in possession of its facts.

*A narrative of an exploratory visit to the Consular Cities of China and the Islands of Hong Kong and Chusan*, by the Rev. GEO. SMITH. New York: HARPER & BROTHERS, Publishers, 82 Cliff street.

We are much pleased by the accurate information as to the social condition of the people of the Celestial Empire. Nothing can be more interesting than to examine the results of a civilization that may be, for aught that can be safely conjectured, as old as the age of the flood itself. In glancing over the contents of this, the second part of the work—unfortunately the first part has not come to hand—among the illustrations, a crowd of Chinese Gamblers are moving their respective piles in a manner worthy of more Western climes. On the cover is seen that famous "Junk." If any have not, we urge them to buy this book, and learn something about the land of tea-drinking and opium-smoking.

*Simmonds' Colonial Magazine*, January 1848: London.—We have on many occasions referred to this most invaluable publication, conducted by our friend P. L. Simmonds, Esq. It has been published regularly every month for the last four or five years, and is already a library of colonial information, invaluable to every seeker after truth. The able papers which appear upon colonial sugar, cotton, rum, etc., give it value with us. So extraordinary is the empire of England, that the study of her colonies and provinces carries us into every quarter of the globe, and we must become familiar with every part.

We should be pleased to exhibit the Colonial Magazine to any persons who may call upon us with a view of securing so important a work, and we are assured that the expenditure will be amply repaid.

The following are some of the leading articles of the back volumes: Cuba, British Guinea, New Brunswick, Australia, Sandwich Islands, Antiqua, Van Dieman's Land, Bengal, Singapore, Malacca, Canada, Jamaica, Ceylon, Hindostan, India, Barbadoes, Cape of Good Hope, New South Wales, Algeria, China, Malta, Java, Porto Rico, Trinidad, Madras, Demarara, Canadian Lakes, Havana, Manilla, Railroads in India, etc., etc.

*Hunt's Merchant's Magazine*, January 1848.—The January number of our New York cotemporary is now on our table. It contains, as usual, a large amount of valuable statistical matter, diversified with articles of interest. A

very interesting speculation on the Seat of Government of the United States, is at the head of the list. It shows commendable research on a subject of much practical importance, for the capital is generally the political, social, and literary center of a country. A gentleman by the name of Godek Gardwell, in a communication to the editor, published under the title of "Labor and other capital, the rights of each secured, and the wrongs of both eradicated," proposes to publish a book under the same title, by which he will "show the true and only means by which producers have been and are deprived of their just and natural reward, and point out a practicable remedy for the removal of the evils." This is promising much, but knowing that our contemporary, in other respects a most practical and useful man, belongs to the new sect of *benevolents*, we fear that his sympathies may have induced him to publish the communication of his correspondent, and therefore doubt the fulfilment of the promise, although endorsed by the editor of the Merchant's Magazine. There is a fine mercantile portrait in this number.

*The Western Boatman*, a monthly periodical devoted to Steamboat Navigation, by D. EMBREE.

We have glanced hastily over this work, but that glance was sufficient to satisfy us of the great practical importance of it. The leading article, upon "The Rules to Govern Pilots on the Western Waters," evidences a ready pen, a clear head and an intimate acquaintance with the details of the subject, which should command for it an attentive perusal and extended circulation. If, by the adoption of these rules, a single life is preserved, we may well consider that a great object will have been achieved. With how much greater force then must we be impressed with the importance of such regulations as are here suggested, when we reflect on the immense number of lives that are yearly lost by steamboat collisions, without at all regarding in the estimate the immense destruction of property. The law is impotent to restore life. What we require is a preventative; and we believe that by the adoption of these rules and their faithful observance the evil may be in a great measure, if not entirely arrested.

We concur in the recommendations for "The Organization of Societies," as enforced in an article under this head, and heartily commend the work to all interested in Western steamboat navigation.

*Bankers' Magazine*. J. SMITH HOMANS, Baltimore, January, 1848. — Our friend has, in a short period, produced the best work relating to Finance and Banking in the Union. It should be sustained by every merchant or practical citizen. We know of nothing like it anywhere. His present number contains a list of every bank in the Union, with full particulars of their organization, capital, etc. We were pleased to discover in our travels at the North last summer, how high this publication stood; and regret that it is not more patronised among us here. The editor deserves all success. The National Intelligencer of April 14, 1847, says: "No president, cashier or teller of a bank should be without it." We welcome the publication to our table. *Table of contents*:—"National Finances;" "Legal Miscellany;" "Bank Statistics;" "Gold Mines of Russia;" "Bankruptcy of John Bull;" "Bank of England;" "Money Market;" etc.

*Charleston Medical Journal*, Vol. III, No. 1. BURGESS, JAMES & PAXTON. — This valuable journal has been long enough before the public to acquire the highest fame. The editors, Drs. Gaillard and De Saussure, occupy prominent positions in the profession. Among the contributions in the number before us is one from our able friend and neighbor Dr. Nott, of Mobile, on the *Yellow Fever* in that city.

*The Farmers' Library and Monthly Journal of Agriculture*, January, 1848. New York: GREELY & McELRATH.

No farmer can truly lay claim to that honorable name, who does not join knowledge of principles to the brute labor of the hands. Within fifty years chemistry and geology have risen to be the handmaids of agriculture, while within the same, nay even less, statistical and economic science have raised the torch to guide the free sails of commerce. As the discoveries of the laboratory and the closet are reduced to successful practice, it becomes proper to disseminate among practical men their results. This is done with signal ability by the present work; whose veteran editor has devoted himself to the service of agriculture.